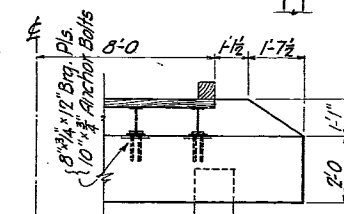
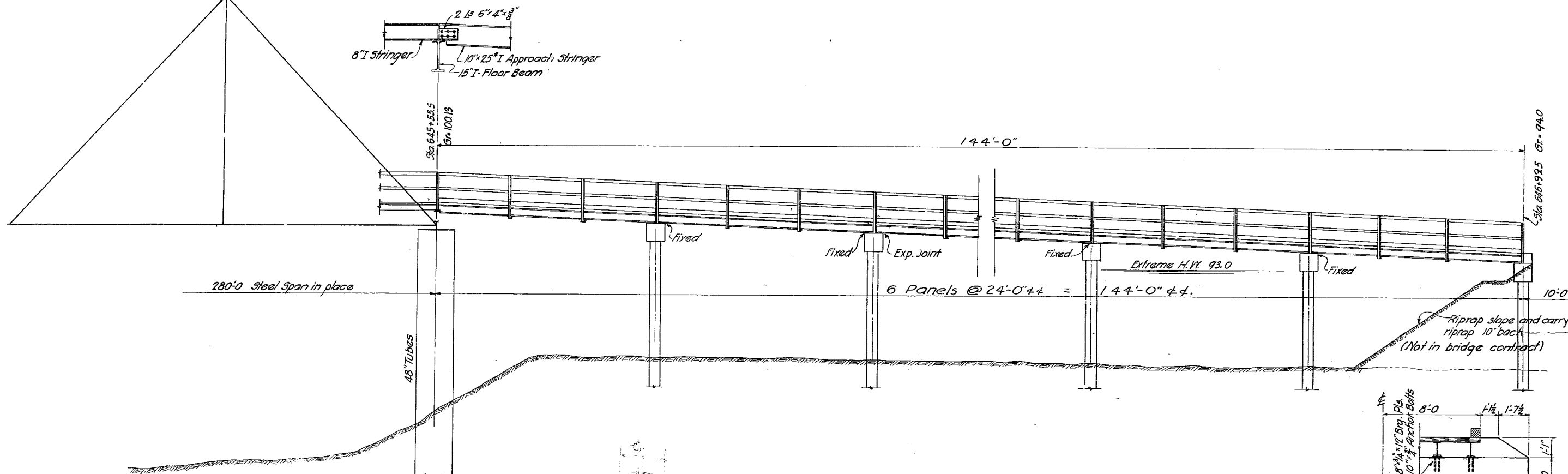
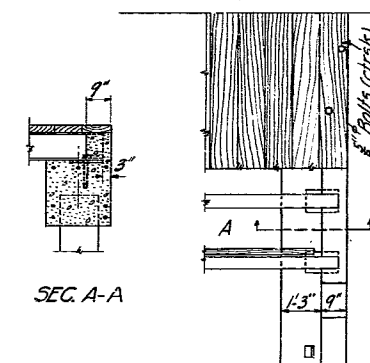


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	129	1929	31	79



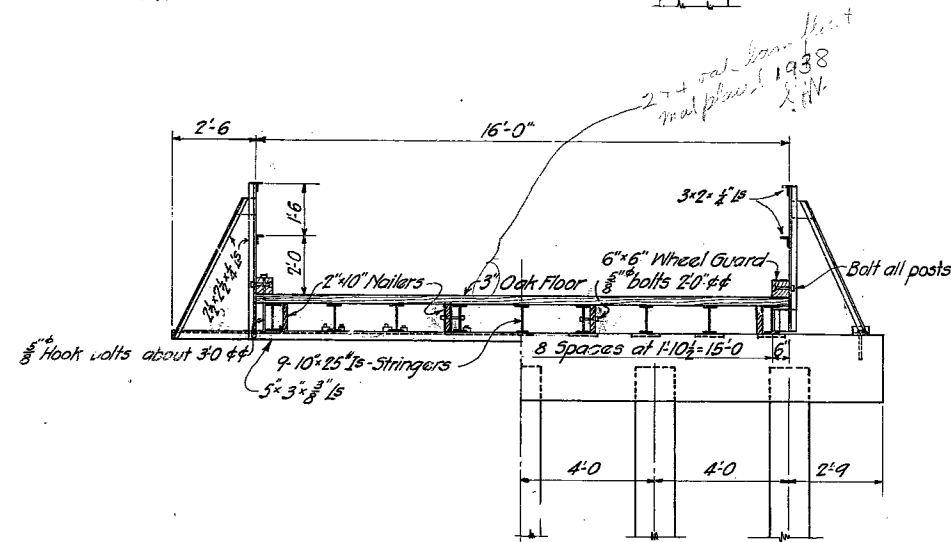
PART ELEVATION OF END BENT



SEC. A-A

GENERAL NOTES:

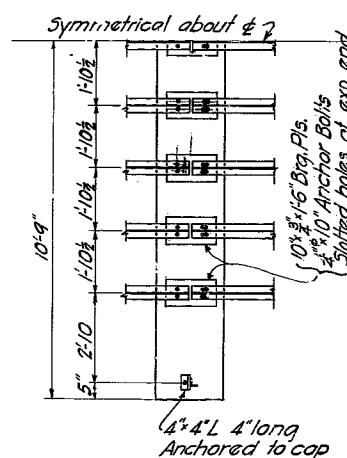
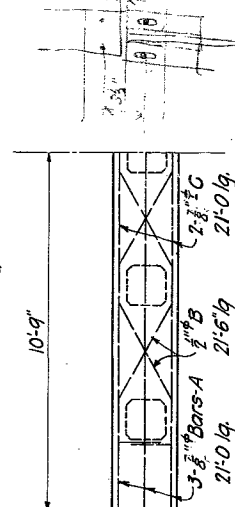
All concrete to be 1:2:4 mix
Reinforcing bars of billet steel, structural grade of deformed type other than twisted squares. Net sectional areas not less than that of plain bars of the sizes given.
Flooring shall be of 3" oak plank not less than 10" wide. For comparing bids piles shall be assumed 30 ft. long. The actual driving length shall be determined by the contractor in accordance with the specifications.
Bearing capacity 20 tons.
Spike flooring to nailers with 6" steel wire spikes.
Concentrated load one 10-ton tractor.



Thru Span

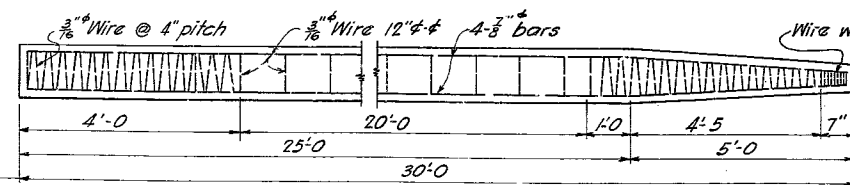
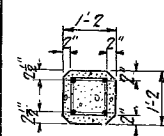
Near Bent

CROSS SECTION



ESTIMATED QUANTITIES

Concrete 1:2:4 mix 18.5 Cu. Yds.
Piles (concrete) 900 Lin. Ft.
Lumber 8820 F.B.M.
Structural Steel 40,300 Lbs.
Reinforcing Steel 14,700 Lbs.



PILE DETAILS

Drawn 7-25-20 by J.W.C.
Chkd. 7-28-20 by W.M.O.

MISSOURI STATE HIGHWAY DEPARTMENT APPROACH OVER ST. FRANCOIS RIVER

STATE ROAD, PIEDMONT-MARBLE HILL
ABOUT 12 MI. FROM PIEDMONT
PROJ. NO. 129 A STA. 645+55.5

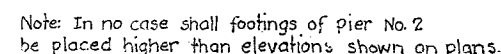
WAYNE COUNTY

Submitted by *Stafford R. Webb*
Approved by *Alexander W. Graham*
BRIDGE ENGINEER
STATE HIGHWAY ENGR.

Revised March 28, 1921

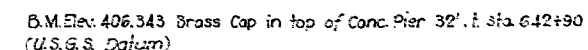
F III

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	2124 500-1123	19		



Note: Concrete in end posts is included with substructure concrete.
Excavation for bridge made above Elev. 375.0 will be paid for as Class 1
Excavation for Structures.
Excavation for bridge made below Elev. 375.0 will be paid for as Class 2
Excavation for Structures.

Excavation for bridge made below Elev.375.0 will be paid for as Class 2 Excavation for Structures.



WAYNE COUNTY

FINISHED

STD-6403

F-113

Drawn NOV. 1954 by K.R.W.
Checked Dec. 1954 by A.F.K.

Note: This drawing is not to scale. Follow dimensions.

Short No. 1 of 13

SEE FINAL PLANS BROWN-LINES

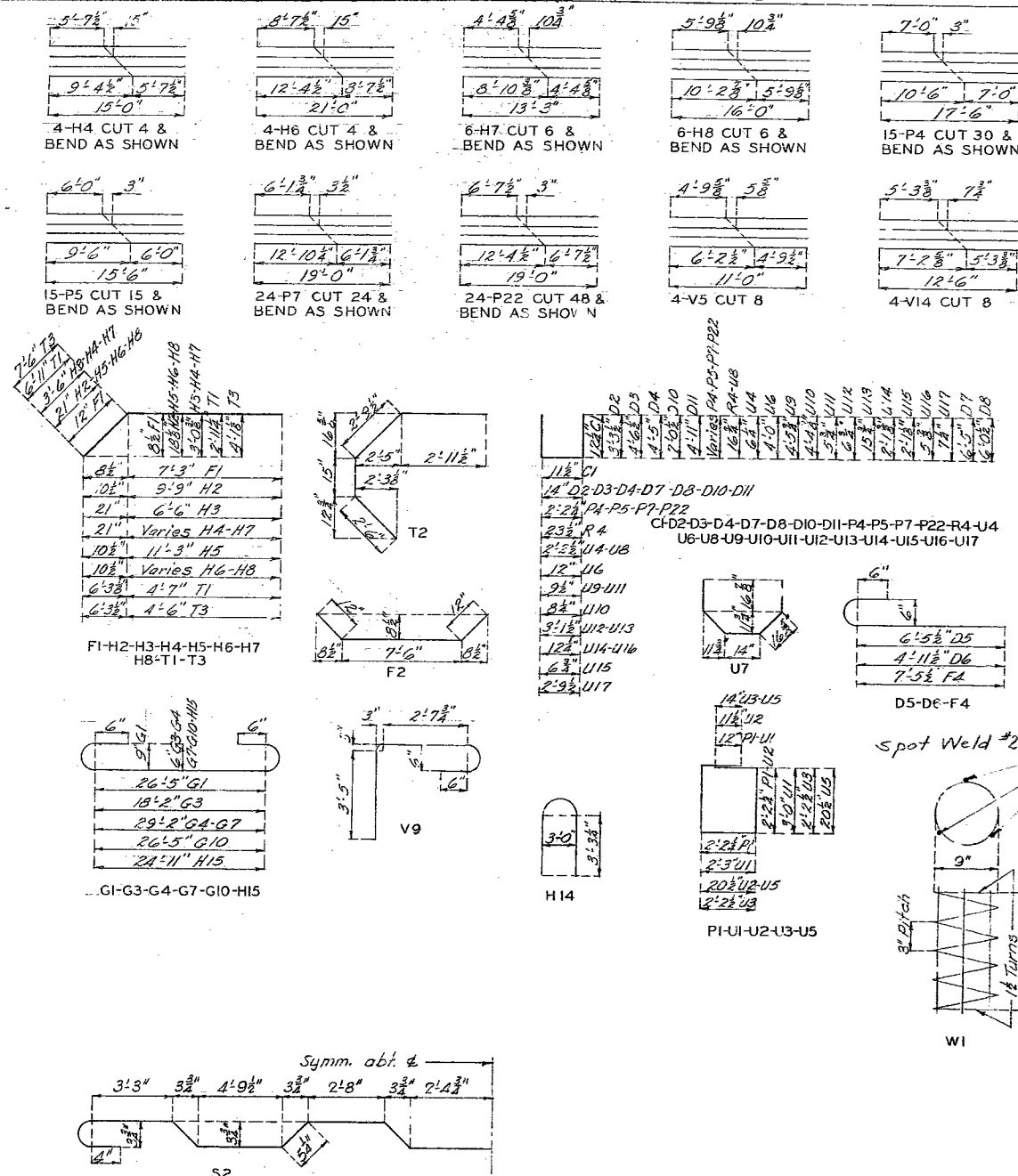
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RT-34-SEC. III(2)	19		

COMPLETE BILL OF REINFORCING STEEL

Bending Sketches & Cutting Diagrams

No.	Size	Length	Mark	Location	No.	Size	Length	Mark	Location
Superstructure					Pier No. 2				
1048	#5	3'-0"	C1	Curb	14	#8	6'-9"	D9	Footing
12	#5	27'-0"	C2	"	2	#6	26'-3"	H10	Cap. Hrch.
30	#6	27'-0"	C3	"	2	#4	26'-3"	H11	"
48	#6	25'-9"	C4	"	2	#6	28'-0"	H12	Cap
24	#6	30'-9"	C5	"	4	#7	26'-0"	H13	"
36	#6	32'-6"	C6	"	4	#7	11'-3"	H14	"
1378	#5	28'-3"	S1	Slab	3	#8	27'-6"	H15	Web
688	#5	30'-6"	S2	"	14	#4	25'-0"	H16	"
4	#5	25'-9"	S3	"	16	#8	12'-9"	P13	Shaft
102	#5	27'-0"	S4	"	20	#4	15'-9"	P14	Web
612	#5	27'-6"	S5	"	22	#5	9'-0"	U6	"
100	#5	16'-0"	S6	"	24	#5	6'-9"	U7	Cap.
612	#5	30'-0"	S7	"	2	#6	5'-0"	U8	"
End Bent No. 1					25	#5	9'-9"	U9	Cap. Hrch.
30	#7	6'-3"	D6	Foot.	2	#5	9'-6"	U10	"
16	#6	8'-3"	F1	Col. H.	8	#4	2'-1"	U11	"
8	#6	8'-9"	F4	"	10	#6	4'-3"	U12	Cap
3	#8	31'-9"	G4	Beam	26	#6	5'-9"	U13	"
4	#8	10'-0"	G5	"	2	#6	4'-0"	U17	A.B. Well
Pier No. 3					Pier No. 4				
1	#6	29'-9"	G6	"	20	#8	6'-9"	D9	Footing
5	#6	31'-9"	G7	"	2	#6	28'-0"	H12	Cap
2	#4	22'-9"	G8	"	4	#7	26'-0"	H13	"
12	#7	18'-6"	P2	Column	4	#7	11'-3"	H14	"
18	#7	18'-0"	P3	"	3	#8	27'-6"	H15	Web
30	#3	17'-6"	P4	"	32	#4	25'-0"	H16	"
15	#3	15'-6"	P5	"	16	#8	32'-6"	P15	Col.
12	#4	15'-9"	P6	"	20	#8	22'-3"	P16	"
2	#5	12'-0"	H1	Wing	20	#4	32'-6"	P17	Web
2	#6	11'-6"	H2	"	22	#5	9'-0"	U6	"
6	#5	10'-0"	H3	"	24	#5	6'-9"	U7	Cap
4	#5	15'-0"	H4	"	2	#6	5'-0"	U8	"
6	#6	13'-0"	H5	"	10	#6	4'-3"	U12	"
4	#6	21'-0"	H6	"	26	#6	5'-9"	U13	"
6	#4	6'-9"	R1	End Post	2	#6	4'-0"	U17	"
6	#4	6'-0"	R2	"	8	#2	19'-9"	W1	A.B. Well
28	#6	4'-0"	R3	"	Pier No. 5				
14	#5	4'-9"	R4	Curb	End Bent No. 9				
2	#6	6'-0"	R5	"	20	#8	6'-9"	D9	Footing
2	#6	7'-0"	R6	"	20	#6	11'-0"	D11	"
2	#6	7'-9"	R7	"	2	#6	28'-0"	H12	Cap
2	#5	6'-0"	R8	"	4	#7	26'-0"	H13	"
2	#5	7'-0"	R9	"	4	#7	11'-3"	H14	"
4	#6	11'-6"	T1	Wing	16	#6	8'-3"	F1	Col. Hrch.
4	#6	9'-6"	T2	Wing	8	#6	13'-3"	D8	"
31	#4	10'-0"	U3	Beam	3	#8	27'-6"	H15	Web
8	#4	3'-3"	U4	"	12	#4	25'-0"	H16	"
8	#5	11'-0"	V5	Wing	2	#6	27'-3"	H17	Cap. Hrch.
4	#5	3'-3"	V6	"	20	#8	31'-0"	P19	Shaft
4	#5	2'-3"	V7	"	16	#8	14'-9"	P20	"
16	#5	6'-6"	V8	"	20	#4	14'-9"	P21	Web
6	#6	7'-9"	V9	"	22	#5	9'-0"	J6	"
54	#5	4'-9"	V10	Bk. Wall	24	#8	29'-0"	G10	Tie Beam
					2	#5	12'-0"	H1	Wing
					2	#6	11'-6"	H2	"
					10	#6	4'-3"	U12	"
					26	#6	5'-9"	U13	"
					26	#5	5'-3"	U14	Cap. Hrch.
					2	#5	4'-9"	U15	"
					12	#4	2'-0"	U16	"
					2	#6	1'-0"	U17	Cap
					16	#2	19'-9"	W1	A.B. Well
					Intermediate Bents No. 6 & 8				
					16	#6	7'-9"	D2	Footing
					16	#6	10'-3"	D3	"
					32	#7	7'-9"	D5	"
					32	#6	8'-3"	F1	Brn Hrch.
					24	#8	9'-6"	F2	Tie Brn Hrch.
					24	#1	29'-3"	G1	Beam
					4	#6	27'-3"	G2	"
					12	#8	20'-9"	G3	Tie Beam
					106	#3	9'-9"	F1	Col. Brn Hrch.
					35	#5	11'-6"	U1	Beam
					26	#4	8'-9"	U2	Tie Beam
					16	#7	26'-0"	V1	Col. Brn Hrch.
					32	#7	10'-9"	V2	Col.
					14	#7	19'-0"	V4	Col. Brn Hrch.
					16	#2	19'-9"	W1	A.B. Well
					Intermediate Bent No. 7				
					6	#6	7'-9"	D2	Footing
					8	#6	10'-0"	D4	"
					16	#7	7'-9"	D5	"
					16	#6	8'-3"	F1	Col. Hrch.
					12	#6	9'-6"	F2	Tie Brn Hrch.
					12	#1	29'-9"	G1	Beam
					2	#6	27'-3"	G2	"
					6	#8	2'-9"	G3	Tie Beam
					50	#3	9'-9"	P1	Column
					13	#4	8'-9"	U2	"
					16	#7	10'-9"	V2	Column
					16	#7	21'-0"	V3	"
					8	#2	19'-9"	W1	A.B. Well



BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST

ABOUT 13.0 MILES NE. OF PIEDMONT

PROJECT NO. RT.34-SEC. III(2) STA. 642+30

FINISHED

WAYNE

COUNTY

FINISHED

FINISHED

FIN

Drawn Dec. 1954 by M.E.L. & O.H.P.
Checked Dec. 1954 by C.S.A. & H.F.K.

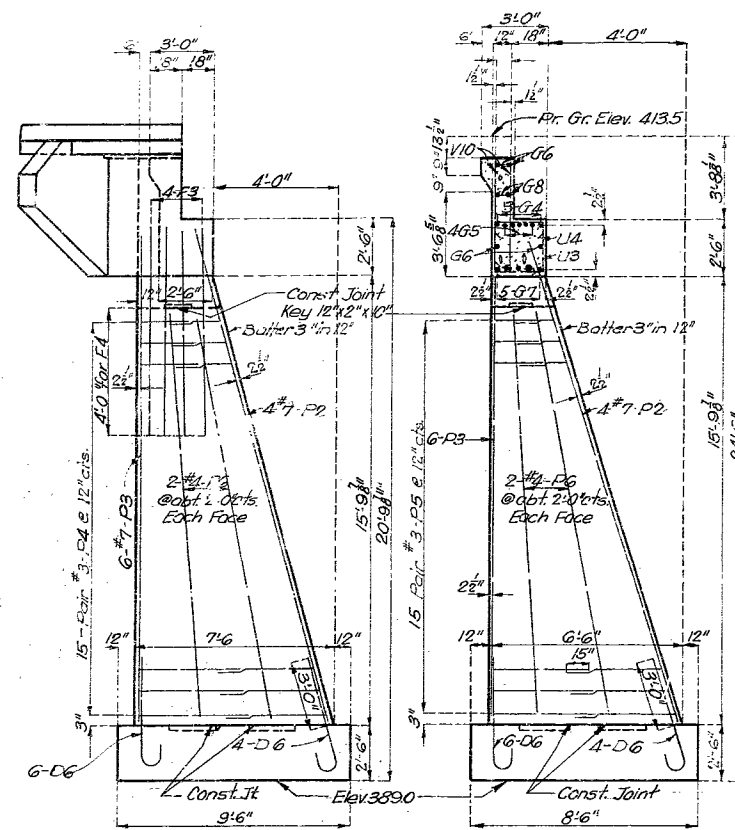
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 15

SEE FINAL PLANS BROWN-LINES

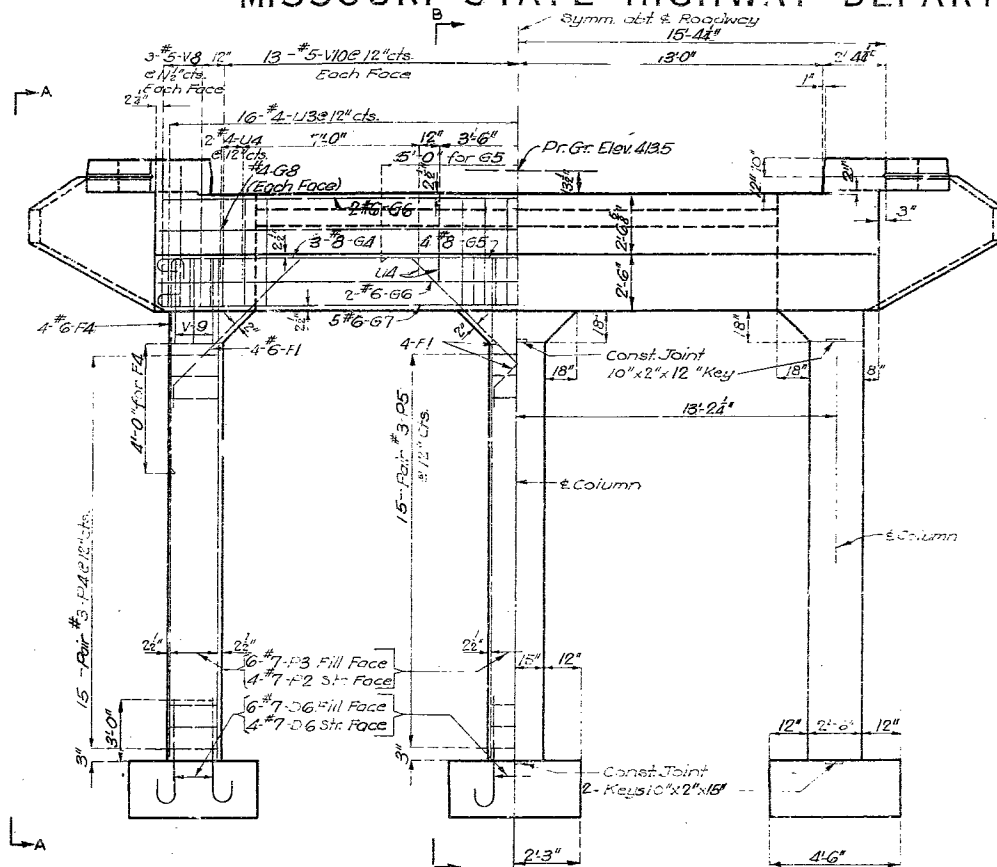
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO	Sec. III(2)	13		

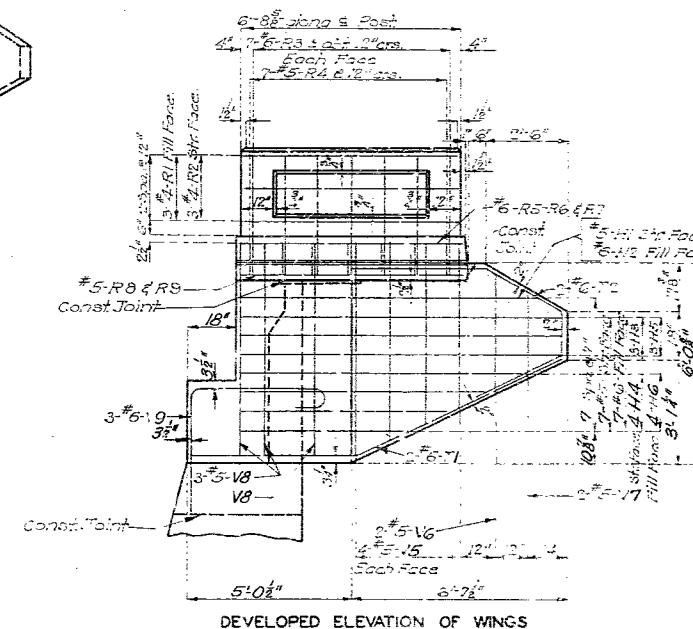


ELEVATION A-A

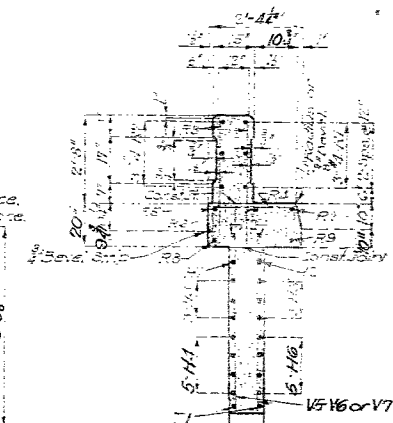
SECTION B-B



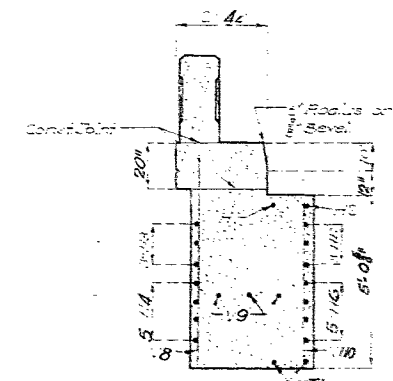
ELEVATION



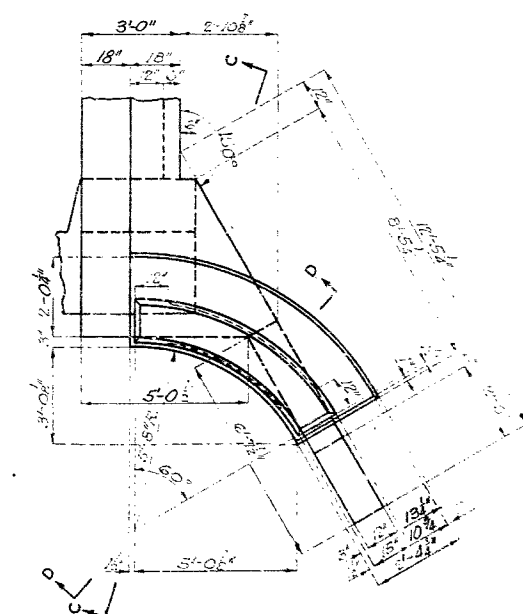
DEVELOPED ELEVATION OF WINGS



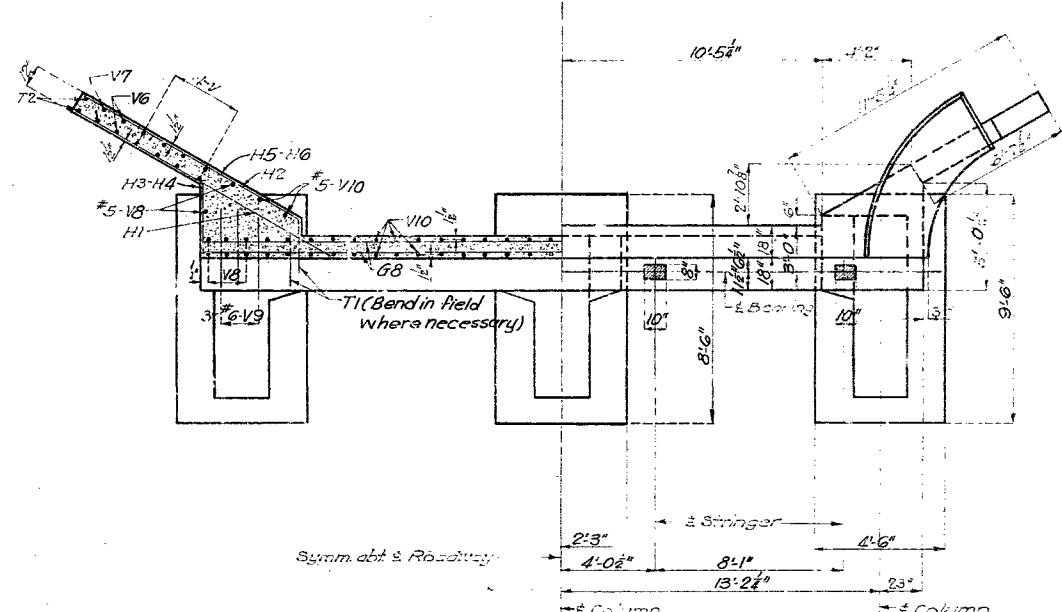
SECTION D-D



PART SECTION C-C



PART PLAN OF WING



PART SECTION THRU BACKWALL

HALF PLAN

DETAILS OF END BENT NO. 1

Note: Fill of End Bent No. 1 shall not be carried above bottom of beam and wings until superstructure span (1-2) is in place.

BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST

ABOUT 13.0 MILES N.E. OF PIEDMONT

PROJECT NO. RT. 34-SEC. III(2) STA. 642+30

WAYNE

COUNTY

F-IIIIR

Assembled Oct. 1954 by KRW & WGS.
Checked Dec. 1954 by C.F.K.

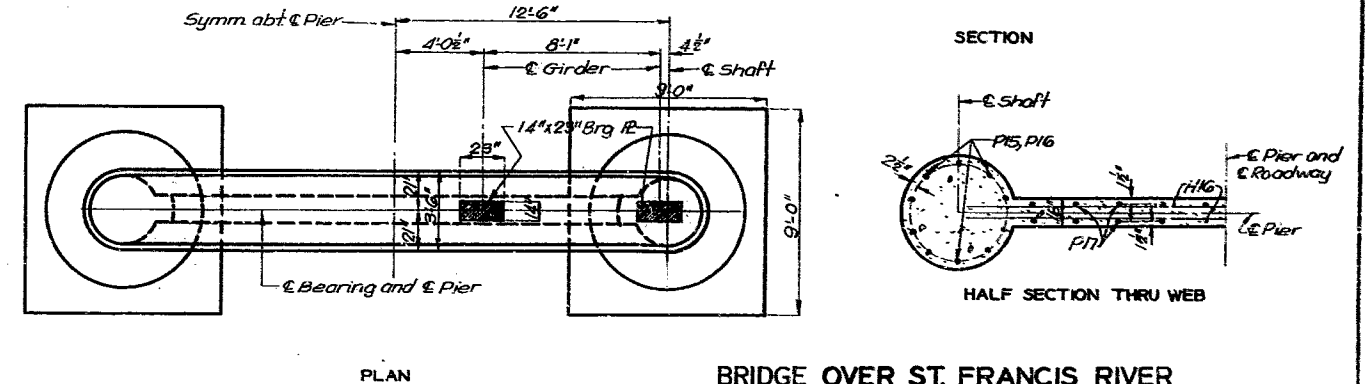
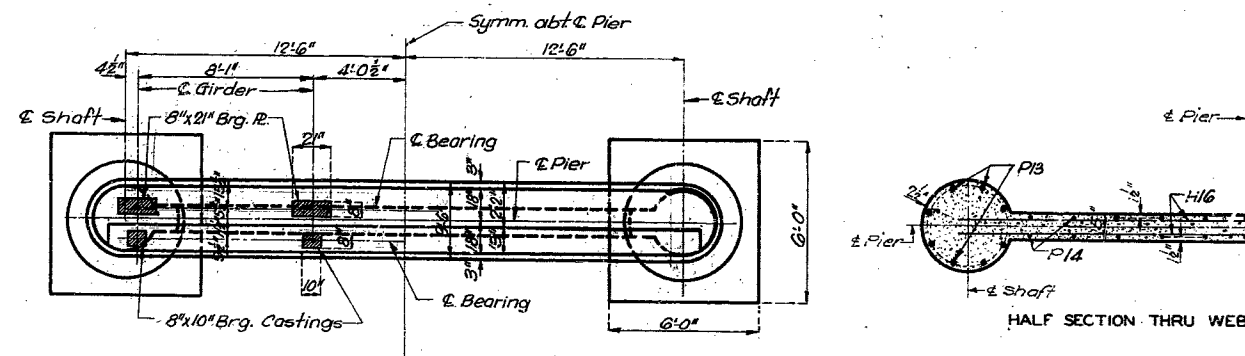
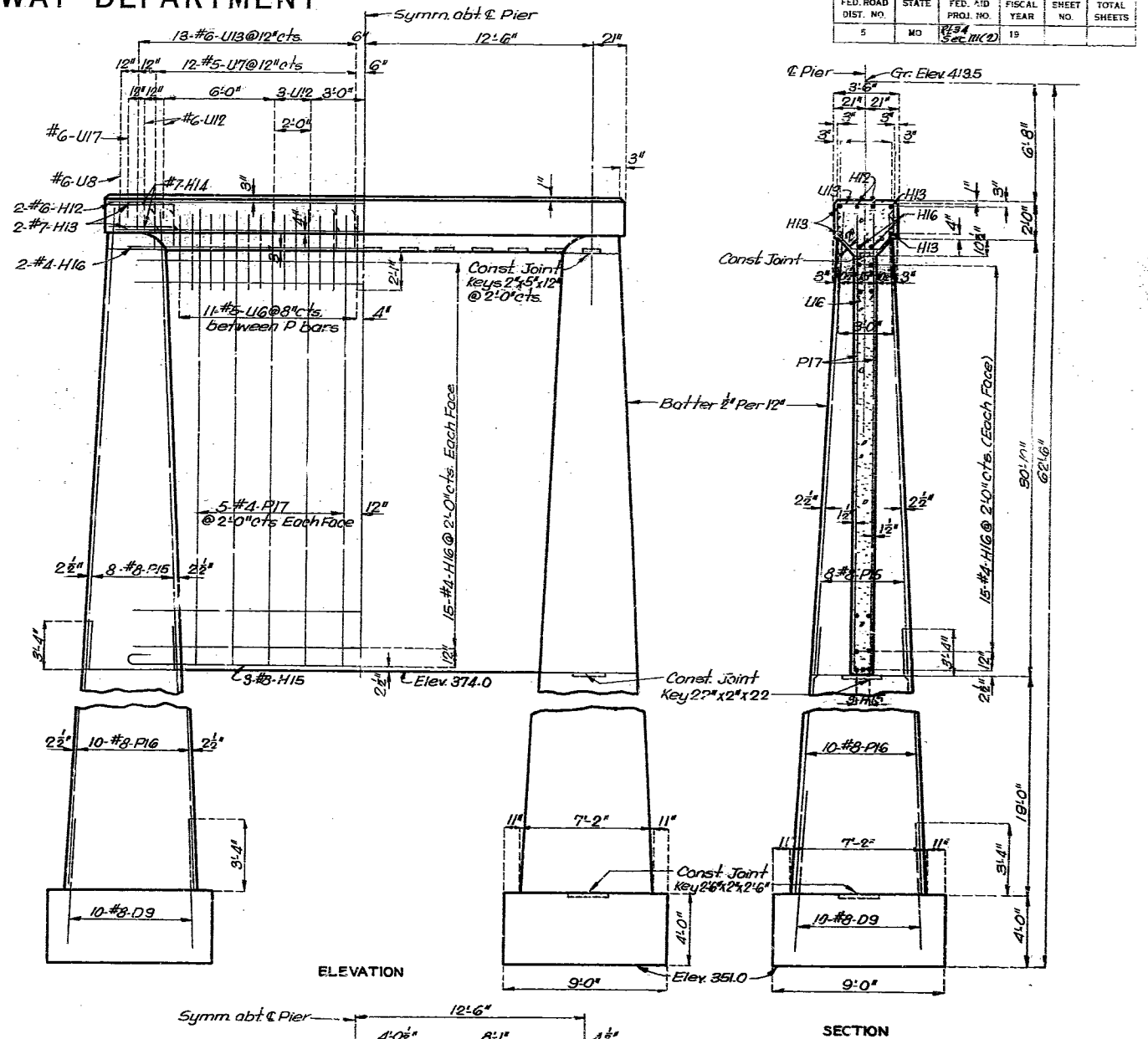
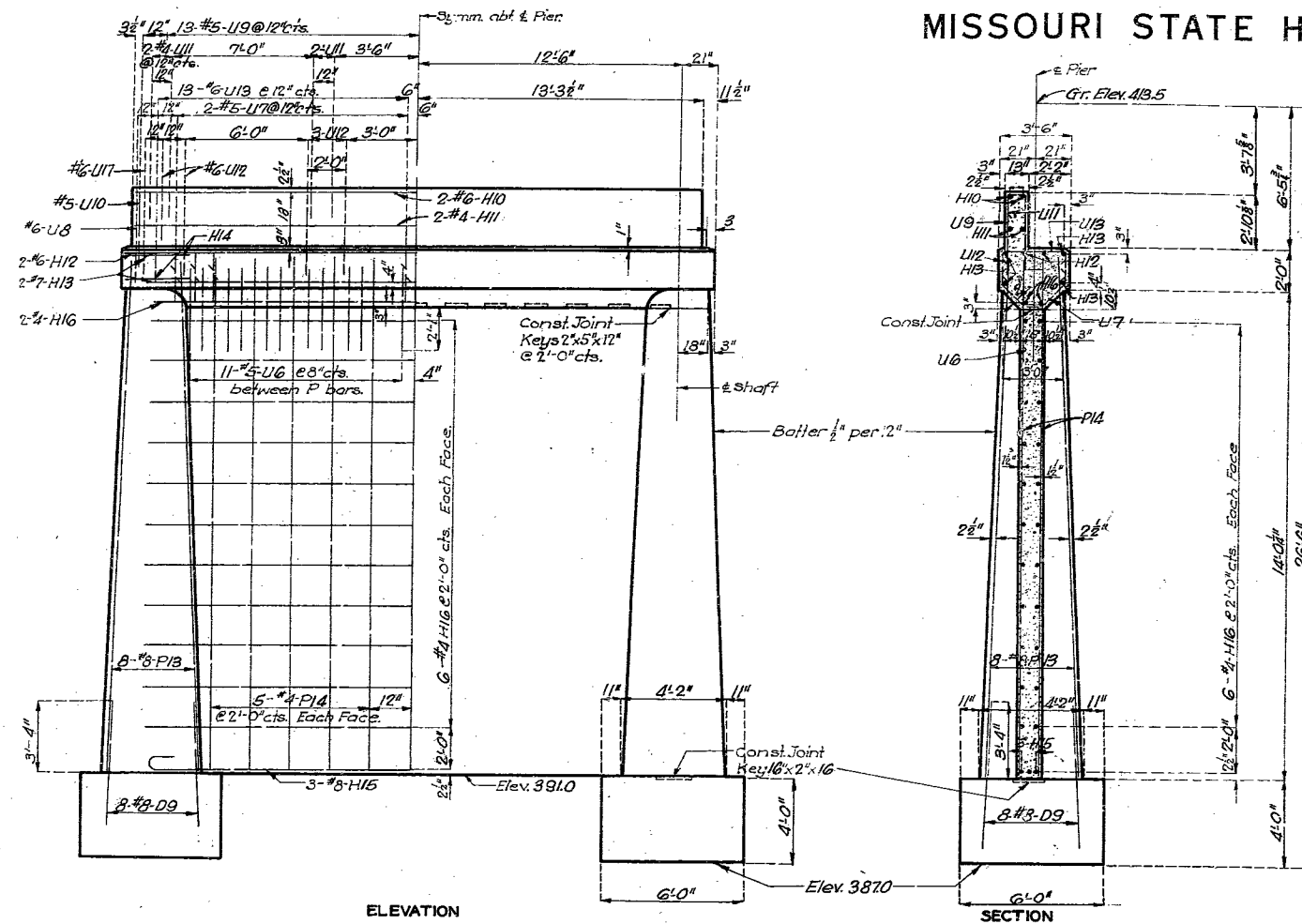
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 13

SEE FINAL PLANS BROWN LINES

142

4.



Assembled Oct. 1964 by K.R.W. & W.G.S.
Checked Dec. 1964 by C.S.A.

DETAILS OF PIER NO. 2

Note: This drawing is not to scale. Follow dimensions.

DETAILS OF PIER NO. 3

BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST

ABOUT 13.0 MILES N.E. OF PIEDMONT

PROJECT NO. RT-34-SEC. 1(2) STA. 642+30

WAYNE COUNTY

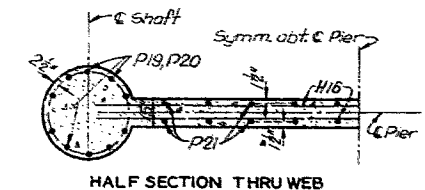
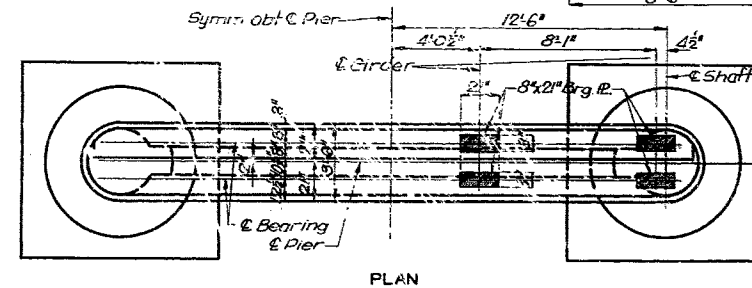
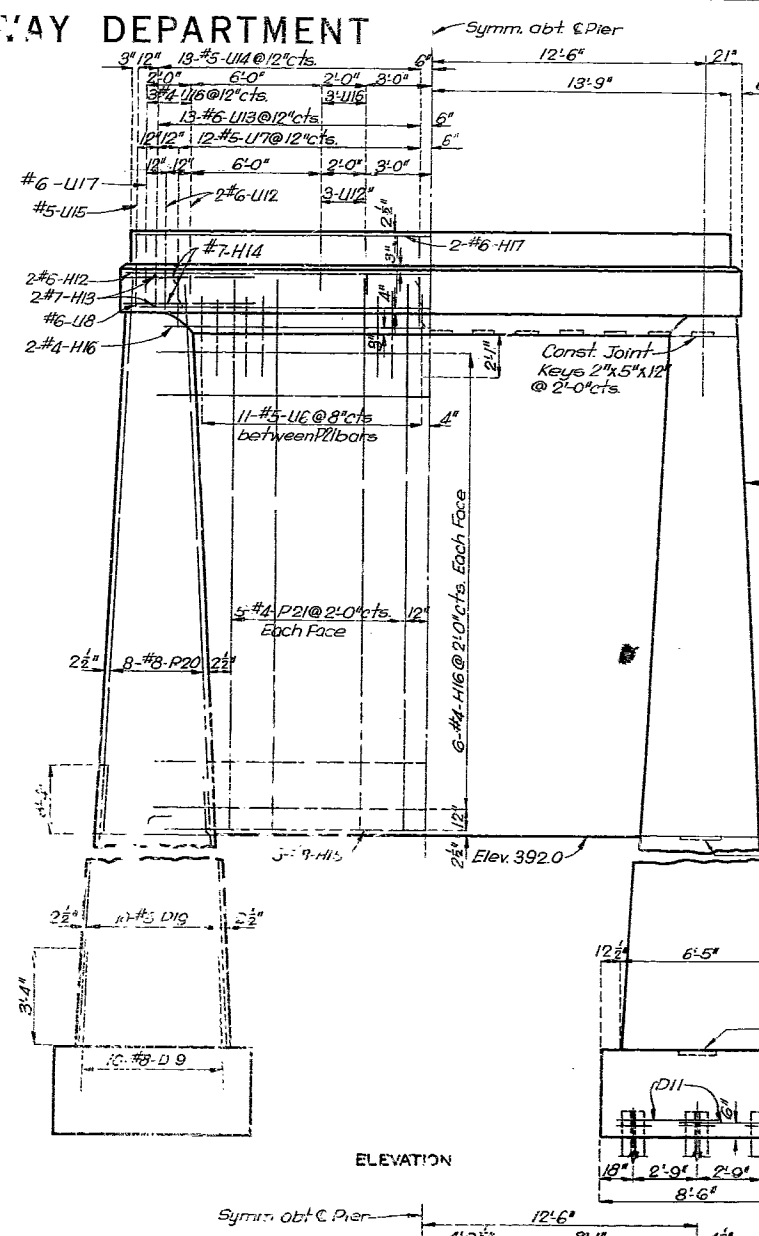
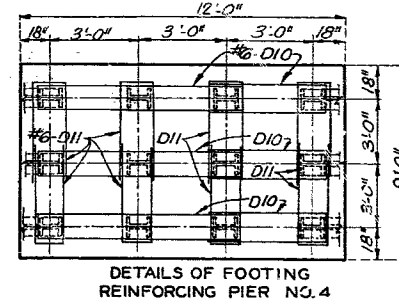
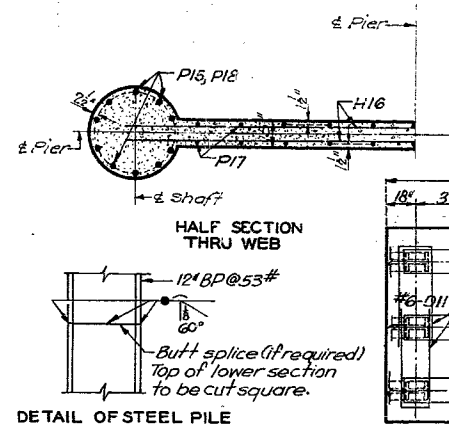
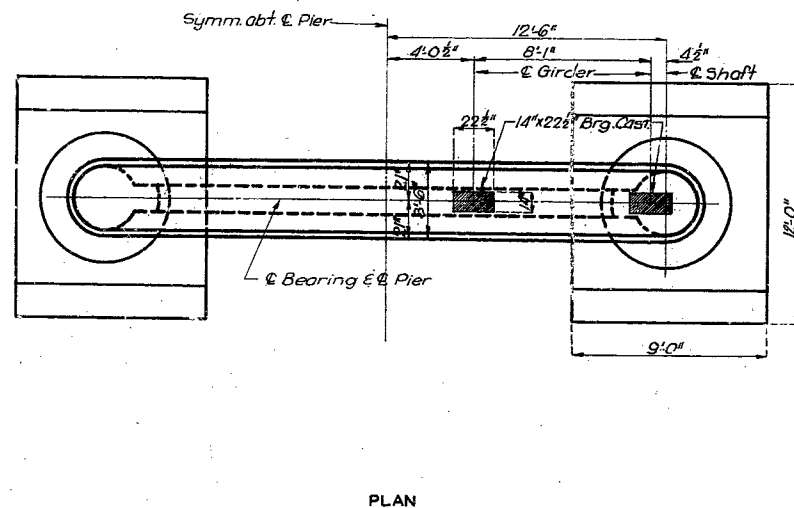
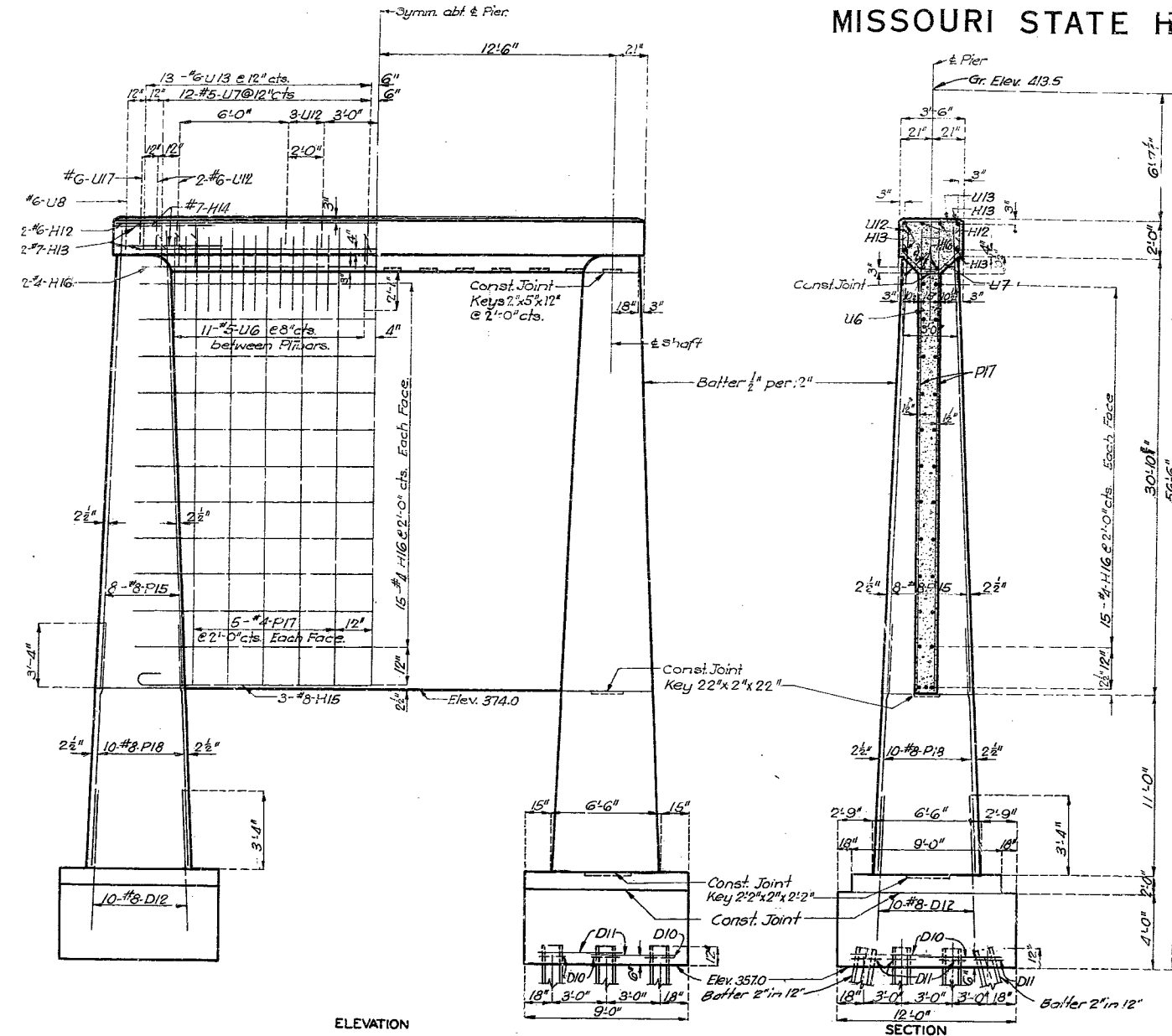
FINIS

F-III R

SEE FINAL PLANS BROWN-LINES

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RT 34 SEC. III (2)	19		



DETAILS OF PIER NO. 5

BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST
ABOUT 13.0 MILES N.E. OF PIEDMONT
PROJECT NO. RT. 34-SEC. III (2) STA. 642+30

WAYNE COUNTY

Assembled Oct 1954 by KRW & W.G.S.
Checked Dec 1954 by A.F.K.

DETAILS OF PIER NO. 4

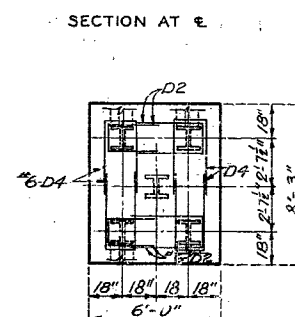
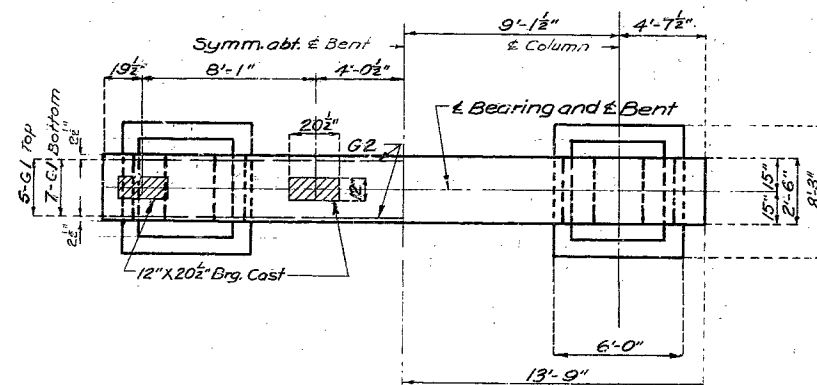
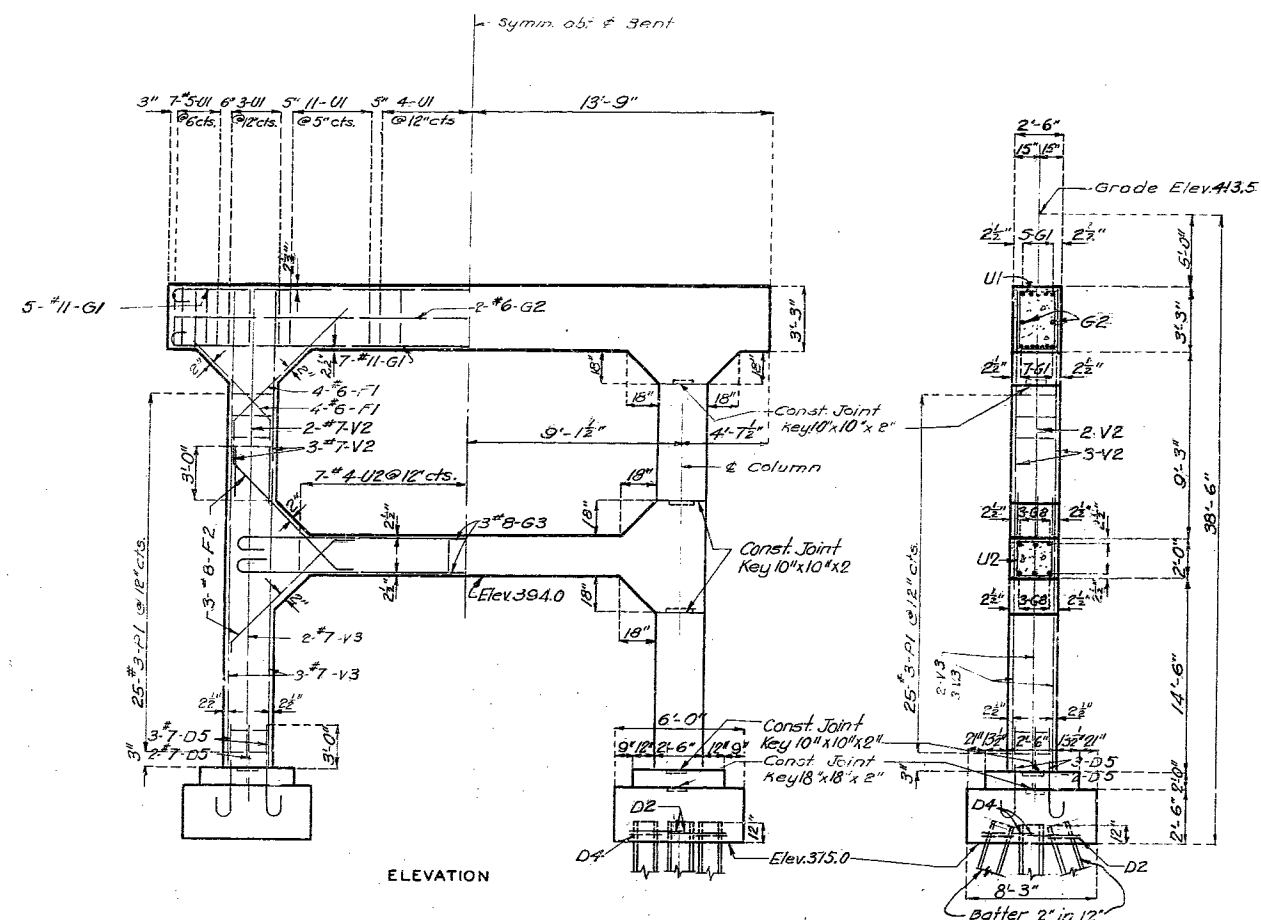
Note: This drawing is not to scale. Follow dimensions.

DETAILS OF FOOTING REINFORCING PIER NO. 5

F-1112

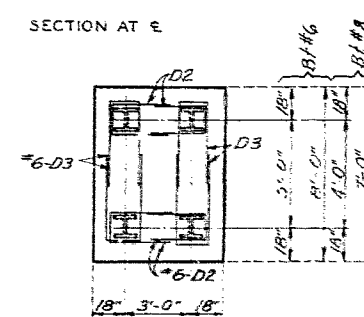
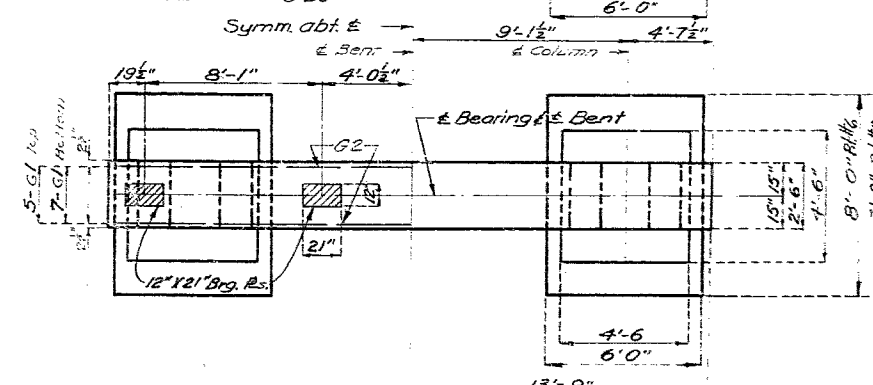
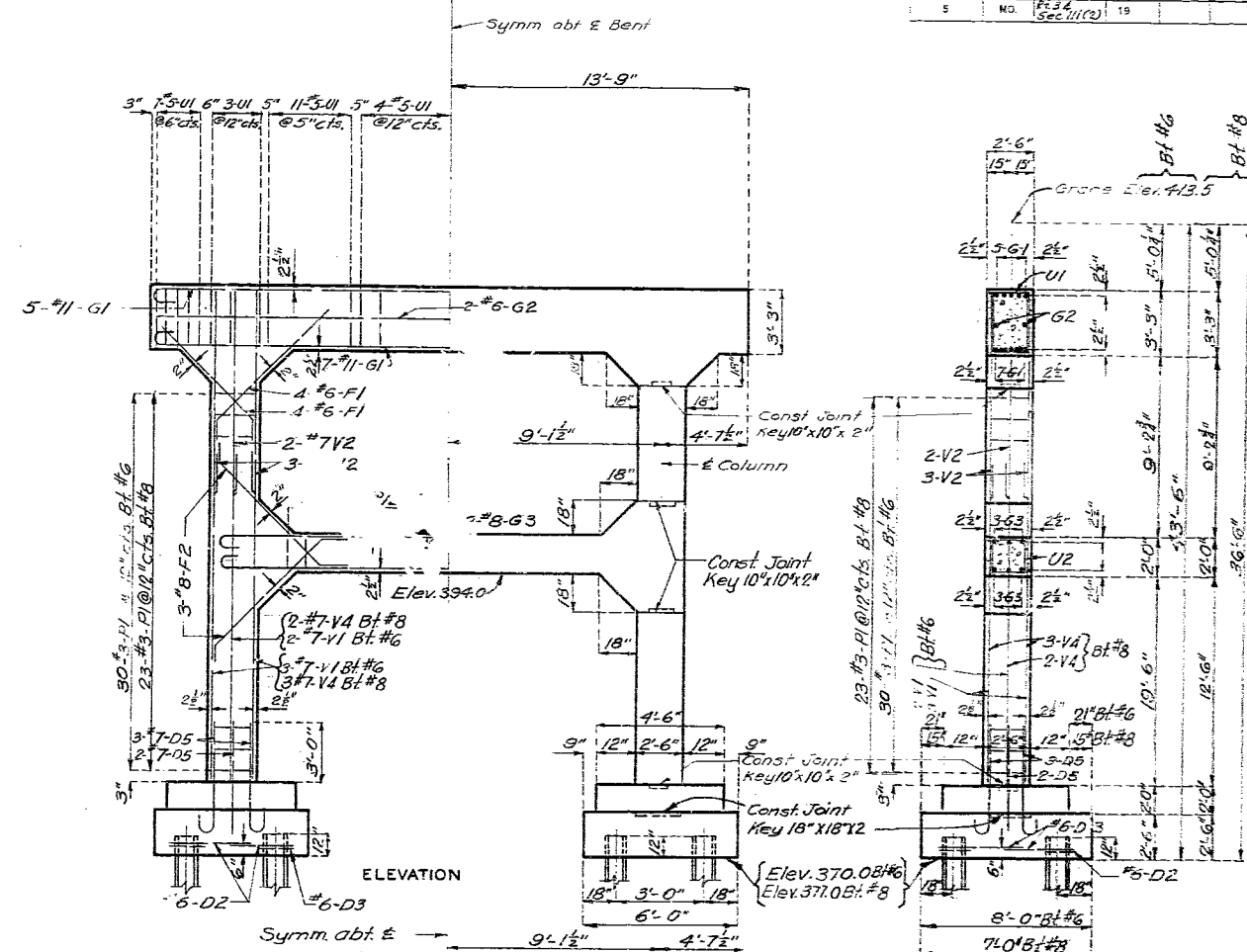
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	MO.	PR 34 6-11-60	19		



DETAILS OF FOOTING SHOWING
REINFORCEMENT FOR BENT NO. 7

PLAN
DETAILS OF INTERMEDIATE BENT NO. 7



DETAIL OF FOOTING SHOWING
REINFORCEMENT FOR BENTS NO. 6 & 8

PLAN
DETAILS OF INTERMEDIATE BENTS NO. 6 & 8

BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST
ABOUT 13.0 MILES N.E. OF PIEDMONT

PROJECT NO. RT. 34-SEC. III (2) STA. 642+30

WAYNE COUNTY

Assembled Oct. 1954 by K.R.W., J.H.K. & W.G.S.
Checked Dec. 1954 by Q.F.K.

Note: This drawing is not to scale. Follow dimensions

Sheet No 6 of 13

F-118

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	124 Sec. 111(2)	19		

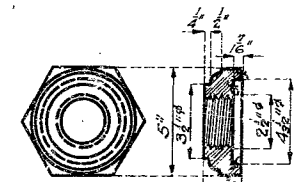


Sheet No. 7 of 13

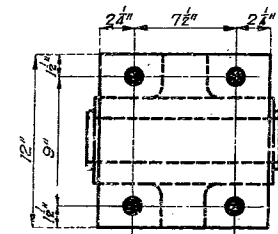
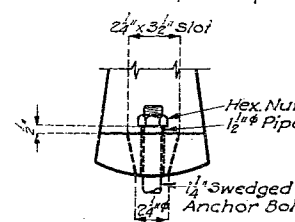
F-III R

MISSOURI STATE HIGHWAY DEPARTMENT

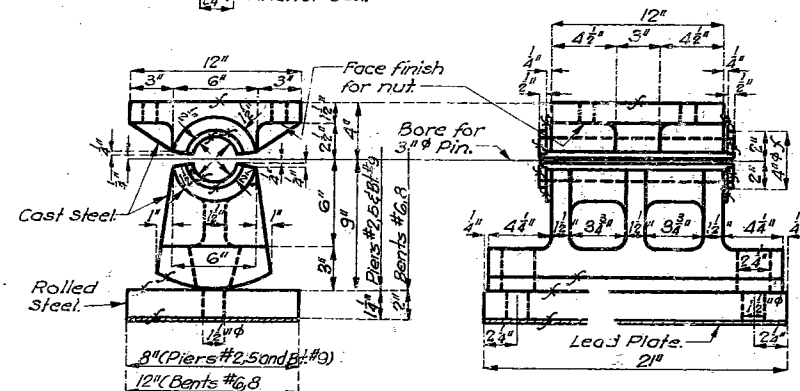
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RT-34-SEC. III(2)	19		



CAST STEEL NUT
72 - Required
36-3" Rolled steel pins required.

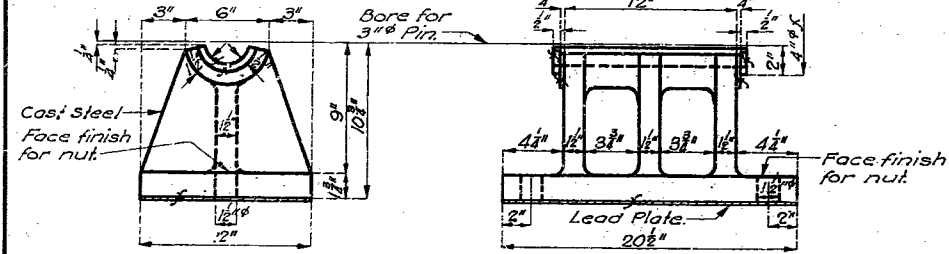


Drill holes for 1" turned bolts.



EXPANSION ROCKER FOR BENTS NO. 6-9 & PIER NO. 2 & 5
4-Sets Req'd for Pier No. 2 8-Sets Req'd for Pier No. 5, 4-Sets Req'd for Bent No. 6
4-Sets Req'd for Bent No. 8 4-Sets Req'd for Bent No. 9

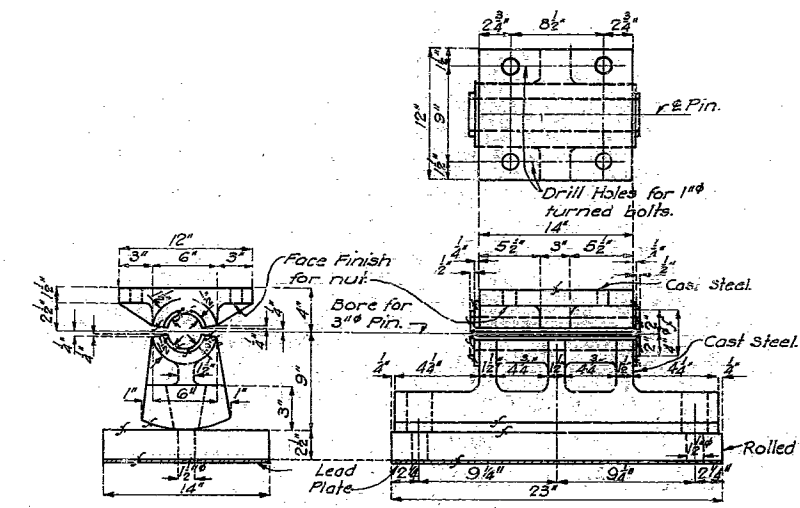
Note: Cast steel cap same as shown above.



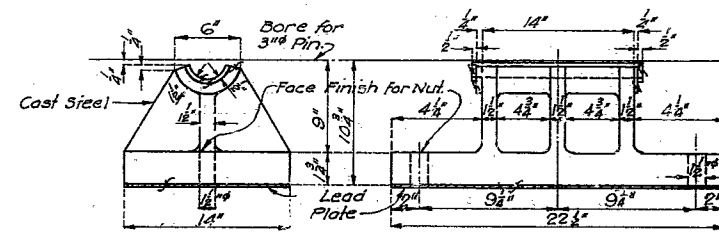
Note: Cast steel cap same as shown for Exp. Pedestal

FIXED PEDESTAL FOR BENT NO. 7
4-Sets Required

TYPE "A"

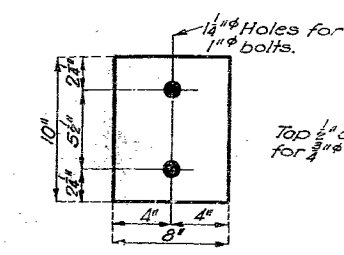


EXPANSION ROCKER FOR PIER NO. 3
4-Sets Required.

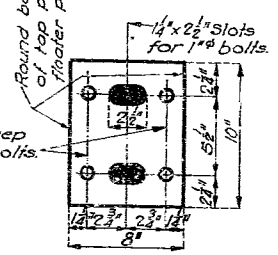


Note: Cast Steel Cap same as shown above for Pier No. 3

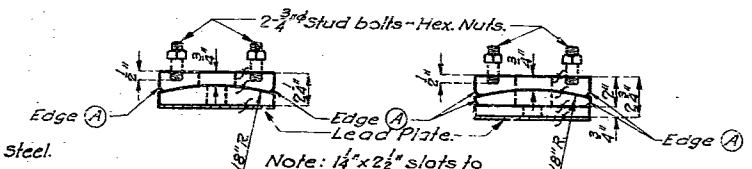
FIXED ROCKER FOR PIER NO. 4
4-Sets Required



BOTTOM PLATES



TOP PLATES



END ELEVATION-FIX. END ELEVATION-EXP.

Required: 4-Sets Span (1-2) Each set consists of 5 plates each.

TYPE "C"

GENERAL NOTES:

- Finish all surfaces marked X.
- All fillets for Type "A" castings shall have 3/4" radius.
- Material for Type "A" castings shall be Cast steel, except as noted. Material for Type "C" castings shall be either gray iron alloy or cast steel but payment will be made as gray iron alloy.
- All pins, bolts, pipe sleeves, rolled steel and pintles shall be paid for as structural steel.
- Anchor bolts for Type "A" castings shall be 1 1/2" swaged bolts with Hex. nuts and shall extend 12" into concrete.
- Anchor bolts for Type "C" castings shall be 1" swaged bolts, no heads or nuts and shall extend 12" into concrete. Top ends of anchor bolts shall be above the top of castings but not higher than 3/4" below the top surface of the bottom flange of beam.
- Lead Plates under bearings shall be approximately 5" thickness and weigh 6-7 3/4 lb. Cost of lead plates shall be included in price bid for other items.
- Edge (A) to be rounded (1/16" to 1/8" radius)

DETAILS OF BEARING CASTINGS

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 8 of 13

BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST
ABOUT 13.0 MILES N.E. OF PIEDMONT
PROJECT NO. RT-34-SEC. III(2) STA. 642+30
WAYNE COUNTY

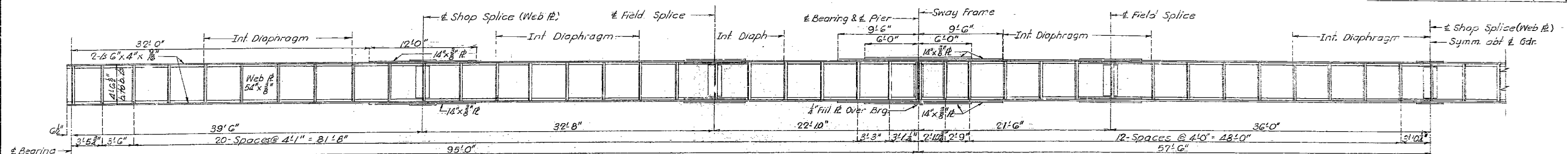
Assembled Nov. 1964 by K.R.W.E.W.G.S.
Checked Dec. 1964 by R.H.L.

NO CONSTRUCTION CHANGES

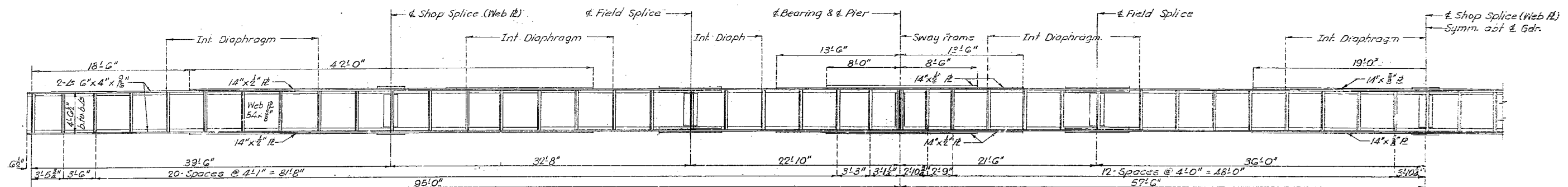
F-111R

MISSOURI STATE HIGHWAY DEPARTMENT

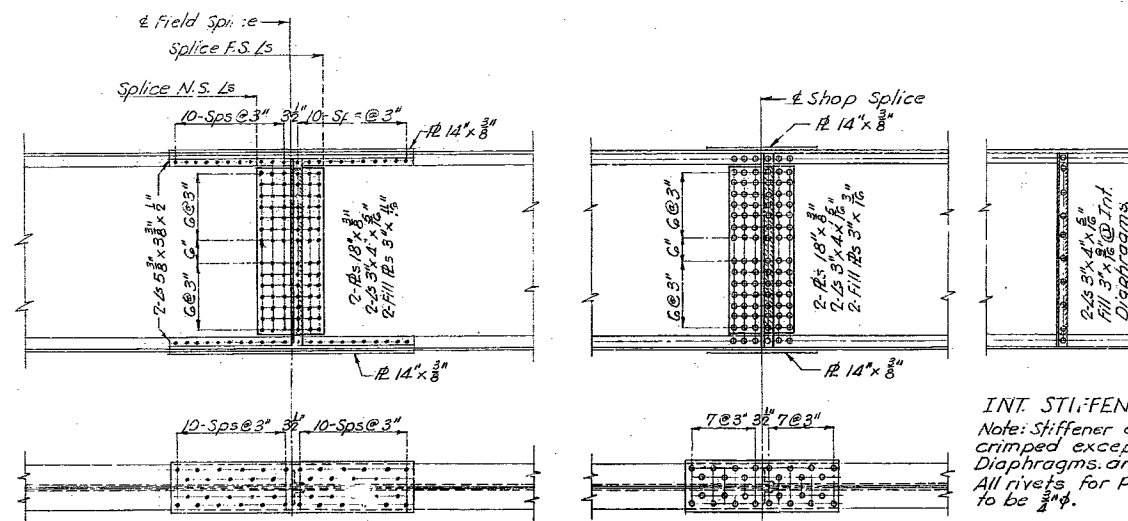
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	Rt 34 SEC. 111 (2)	19		



HALF ELEVATION EXTERIOR GIRDERS - 95' 115' 95' SPAN



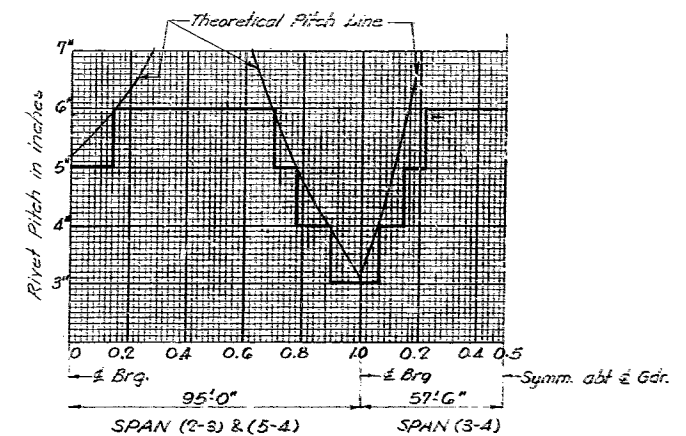
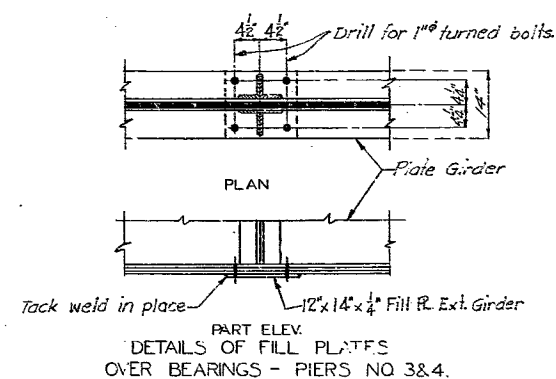
HALF ELEVATION INTERIOR GIRDERS - 95' 115' 95' SPAN



FIELD SPLICE

SHOP SPLICE

INT. STIFFENER ANGLES
Note: Stiffener angles to be crimped except at Interior Diaphragms and Splices. All rivets for Plate Girder to be 3/4".



PITCH DIAGRAM FOR FLANGE RIVETS

Note: Pitch of flange rivets shall not fall above heavy line. Stagger pitch of cover plate rivets is not to exceed 5". Stagger pitch of ends of cover plates is not to exceed 3" for a distance of at least 2'.

BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST

ABOUT 13.0 MILES N.E. OF PIEDMONT

PROJECT NO. RT34-SEC. 111 (2) STA. 642+30

WAYNE

COUNTY

FINISHED

Drawn Mar. 1954 by M.E.L.
Checked Dec. 1954 by R.H.L.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 13

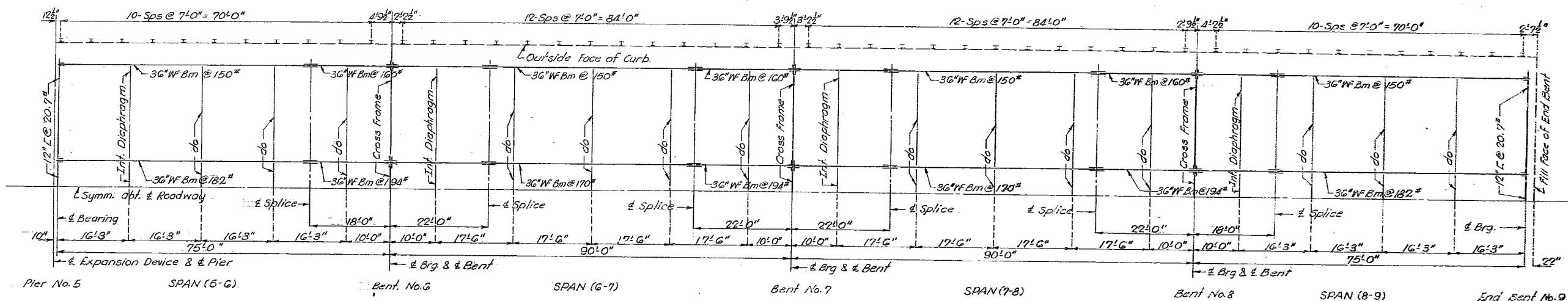
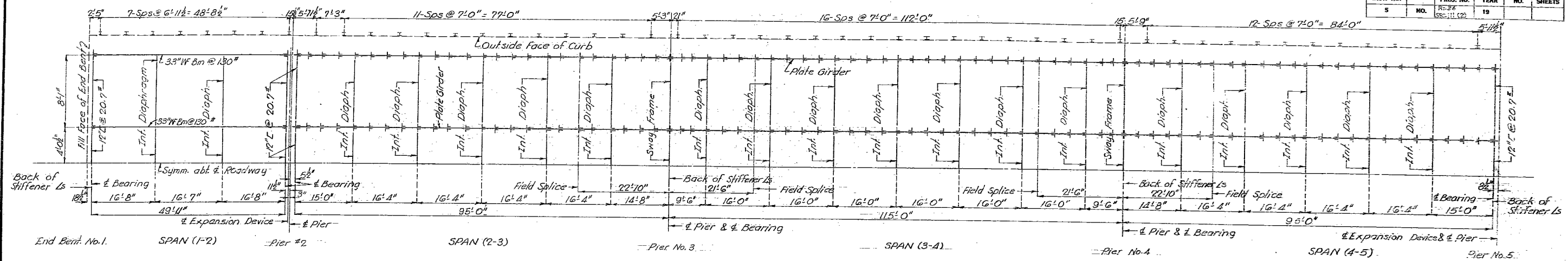
NO CONSTRUCTION CHANGES

FINISHED

F-III R

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	R-34 SEC. 11 (2)	19		



HALF PLAN OF STRUCTURAL STEEL

BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST

ABOUT 13.0 MILES N.E. OF FREDMONT

PROJECT NO. RT. 34 SEC. 11 (2) STA. 642+30

WAYNE

COUNTY

Drawn Mar. 1954 by M.E.L.
Checked Dec. 1954 by R.H.L.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 10 of 13

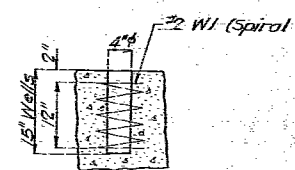
NO CONSTRUCTION CHANGES

FINISHED

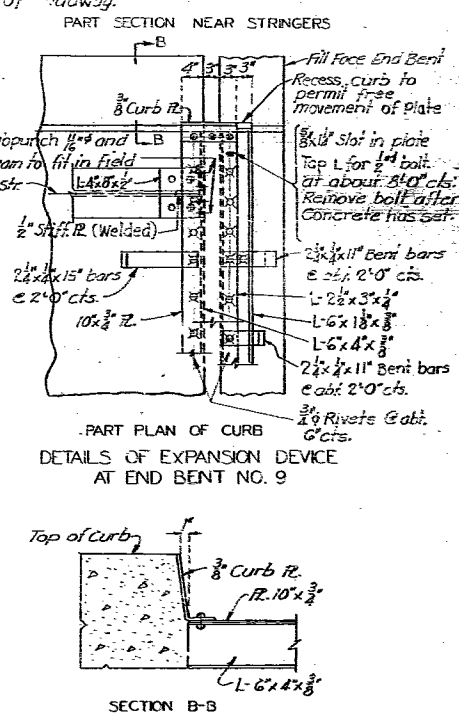
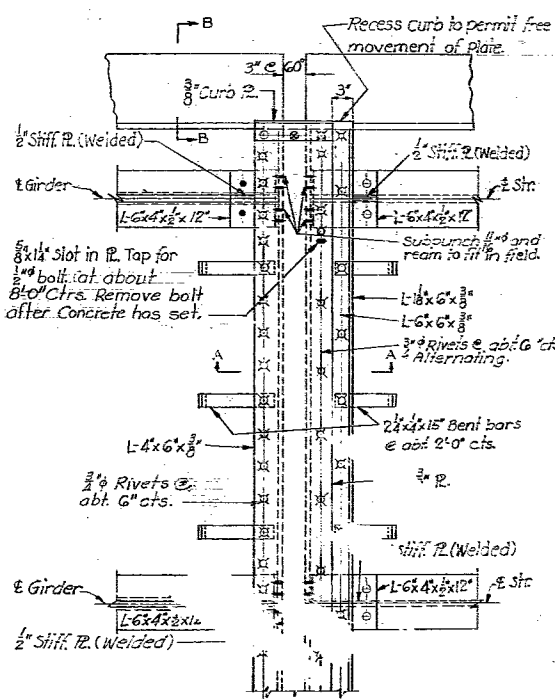
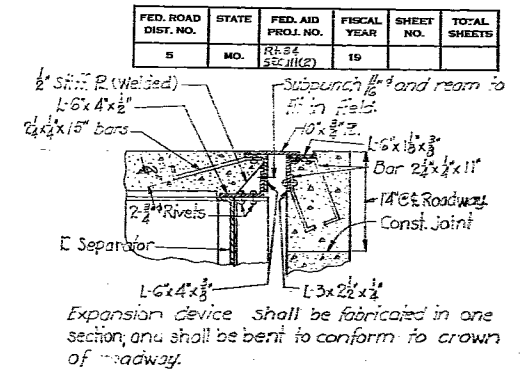
F-111R

148

149

11

50



Drawn NOV. 1954 by K.R.W.
Checked Dec. 1954 by R.H.L.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 12 of 13

NO CONSTRUCTION CHANGES

BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST

ABOUT 13.0 MILES NE. OF FREDMONT

PROJECT NO. RT. 34-SEC.III(2) STA. 642 +30

FINISHED WAYNE

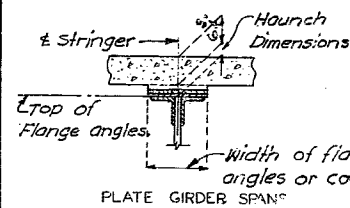
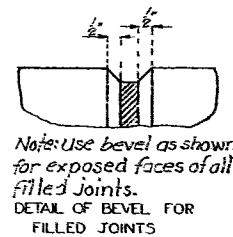
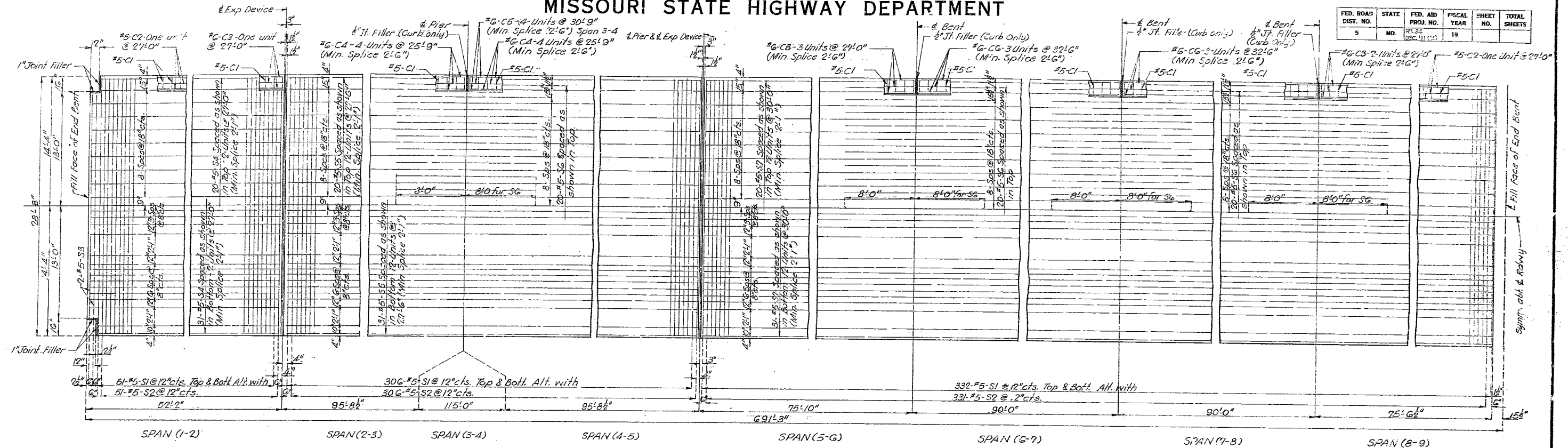
COUNTY

FINISHED

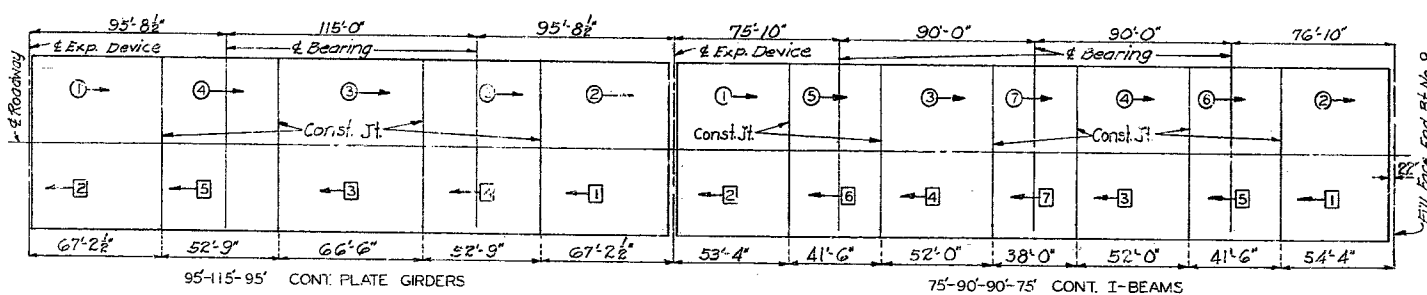
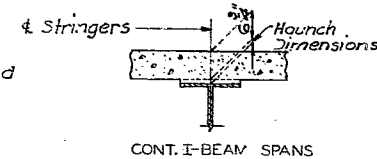
F411R

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	#134 SEC. 111 (2)	19		



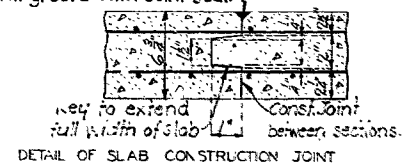
Note: Slab shall be built parallel to grade and to a minimum thickness of 6 3/4". Dead load deflection, crown and any difference in depth of stringers shall be taken care of by haunching to stringers by the amounts shown above. This additional concrete is included in "Estimated Quantities."



Note: The slab shall be poured in sections of the lengths shown above and in the sequence indicated by the numbers 1, 2, 3, 4 and 5 for 95'-115'-95' Cont. Plate Girders and 1, 2, 3, 4, 5, 6 and 7 for 75'-90'-90'-75' Cont. I-Beams, or as an alternate by the numbers 1, 2, 3, 4 and 5 for 95'-115'-95' Cont. Plate Girders and 1, 2, 3, 4, 5, 6 and 7 for 75'-90'-90'-75' Cont. I-Beams. The separate pours shall progress in the direction indicated by the arrows. Longitudinal construction joints will not be permitted.

SLAB POURING SEQUENCE

Finish each side of joint with 3" radius edging tool. Fill groove with joint seal.



BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST
ABOUT 13.0 MILES N.E. OF PIEDMONT
PROJECT NO. RT. 34-SEC. 111 (2) STA. 6+2.30

WAYNE COUNTY

FINISHED

Drawn Mar. 1954 by M.E.L.-K.R.W.
Checked Dec. 1954 by A.F.K.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 13 of 13

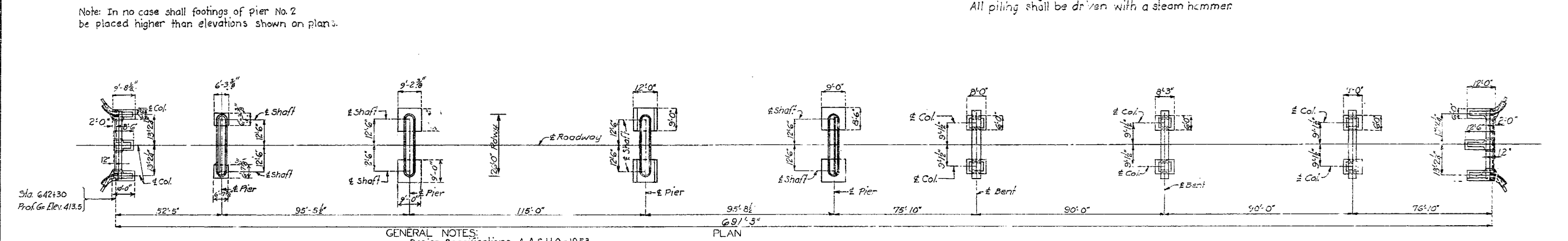
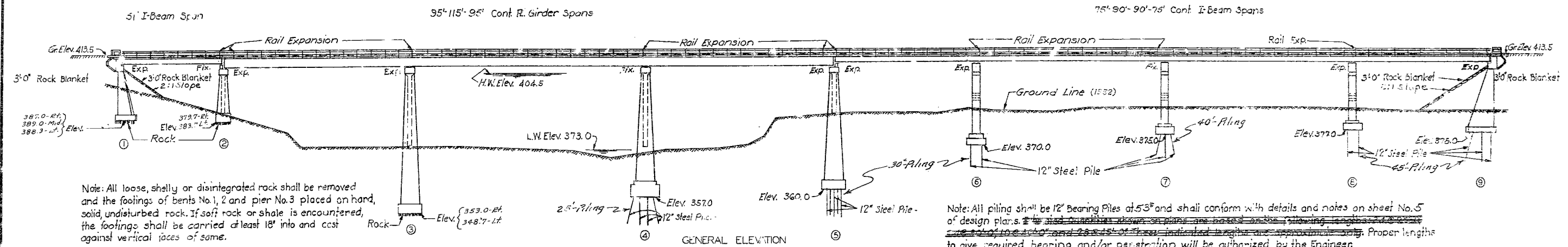
NO CONSTRUCTION CHANGES

FINISHED

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.	RT 34 SEC. 11 (2)	19		

FINAL PLANS

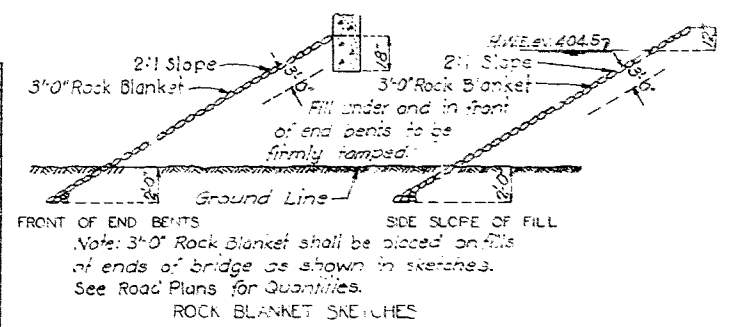
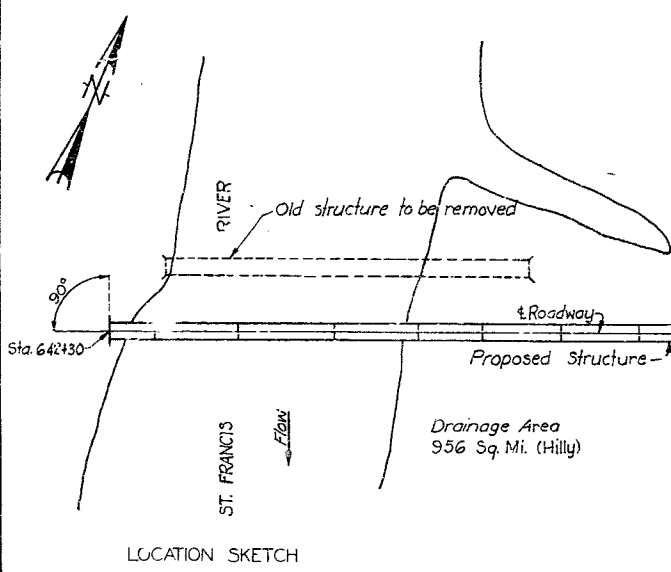


GENERAL NOTES:
Design Specifications A.A.S.H.O.-1953.
Loading H15-44
Structural Steel Stress 18,000 #/sq.
Reinforcing Steel Stress 18,000 #/sq.
Class "B" Concrete Stress 1,000 #/sq.
All concrete shall be Class "B." (Air Entrained)
Rivets 3/4" holes 1/2" except as noted.
Field connections shall be riveted or if the contractor desires he may use high tensile steel bolts with carburized washers in place of rivets, except for connections noted in handrail details. See Special Provisions.
For requirements on welding electrode- see special provisions. Qualifications of welding operators will be required.
Paint: Shop, no. 1; Field, contact surfaces of bolted field connections, except where high tensile bolts are used, one coat of red lead and surfaces inaccessible after erection three coats of red lead. No other paint to be applied by Contractor.
Red lead required shall be furnished by Contractor. Payment for cleaning and painting such surfaces will be included in price bid for fabricated Structural Steel.
All beams and girders over 55 feet in length shall be shipped by rail to the specified shipping point.
Where joint filler is specified on plans it shall conform with the requirements for Premoulded Material for Filler as given in Section 38-19 A(1)h of the Standard Specifications.
A rubbed surface finish will be required on all exposed surfaces of concrete end posts above top of curbs.

FINAL QUANTITIES			
ITEM	SUBSTR.	SUPERSTR.	TOTAL
Class 1 Excavation for Structures.	Cu. Yds.	777.0	777.0
Class 2 Excavation for Structures.	Cu. Yds.	632.5	632.5
Class B concrete.	Cu. Yds.	697.1	1169.2
Fabricated Structural Steel (R. Girder Spans)	Lbs.	296,440	296,440
Fabricated Structural Steel (I-Beam Spans)	Lbs.	334,820	334,820
Steel Castings.	Lbs.	11,950	11,950
Gray Iron Alloy Castings.	Lbs.	430	430
Reinforcing Steel.	Lbs.	48,410	161,816
Steel Piles in place.	Lin. Ft.	2,659	2,659
Steel Pile cut-offs.	Lin. Ft.	473	473
Foundation Test Holes.		100	100
Class 1 Excavation (Below Plan Elev.)		45.0	45.0

Note: Concrete in end posts is included with substructure concrete.
Excavation for bridge made above Elev. 375.0 will be paid for as Class 1 Excavation for Structures.
Excavation for bridge made below Elev. 375.0 will be paid for as Class 2 Excavation for Structures.

Class 1 Excavation (More than 8 feet below plan Elev.)	3.5	3.5
Class 2 Excavation (Below Plan Elev.)	12.5	12.5



B.M. Elev. 406.343 Brass Cap in top of Conc. Pier 32' Lt. Sta. 642+90 (U.S.G.S. Datum)
BRIDGE OVER ST FRANCIS RIVER
STATE ROAD FROM PATTERSON EAST
ABOUT 13.0 MILES N.E. OF PIEDMONT
PROJECT NO. RT 34-SEC. 11 (2) STA. 642+30
WAYNE COUNTY

SUBMITTED BY J. A. Williams DATE 12/27/1954
APPROVED BY Rep. M. Whitten DATE 12/27/1954
CHIEF ENGINEER

STANDARD
FHIR

Drawn NOV. 1954 by K.R.W.
Checked Dec. 1954 by A.J.K.

Note: This drawing is not to scale. Follow dimensions.

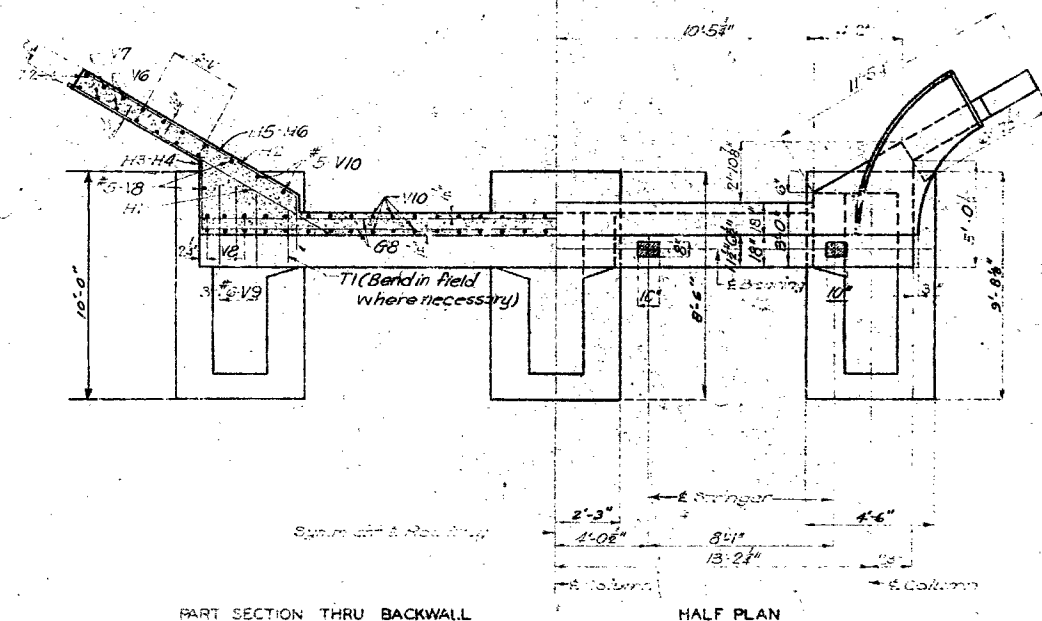
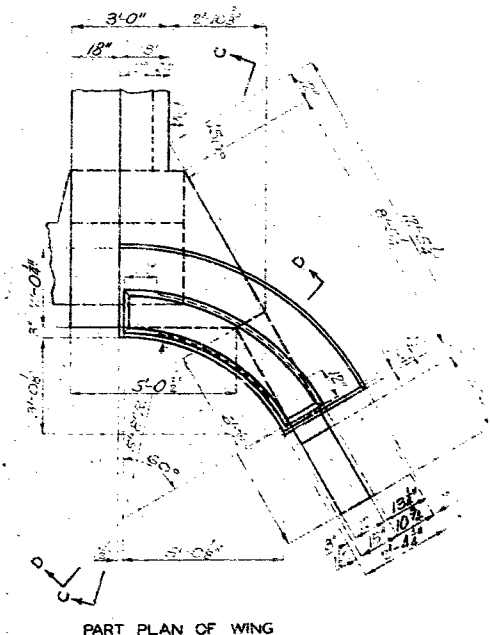
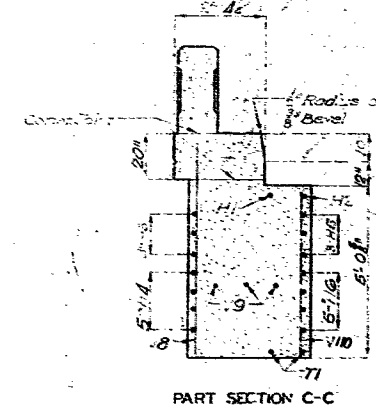
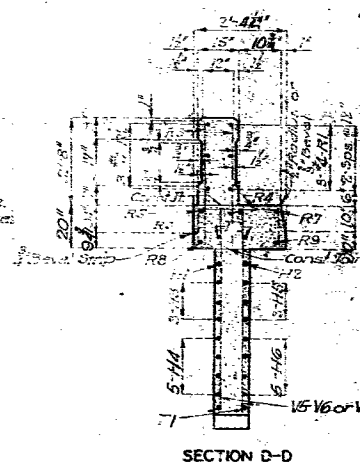
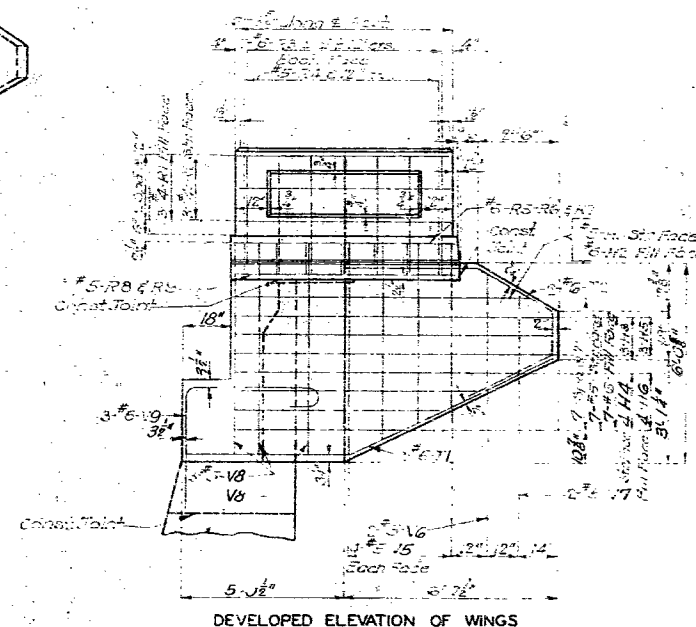
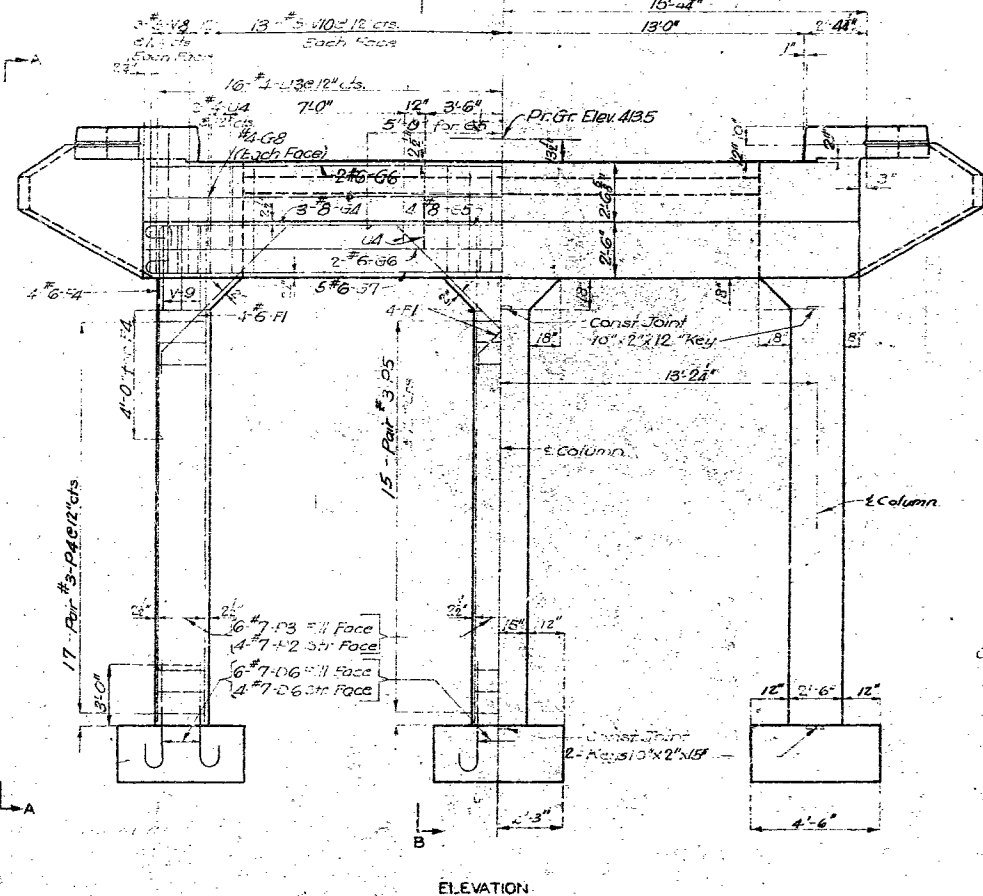
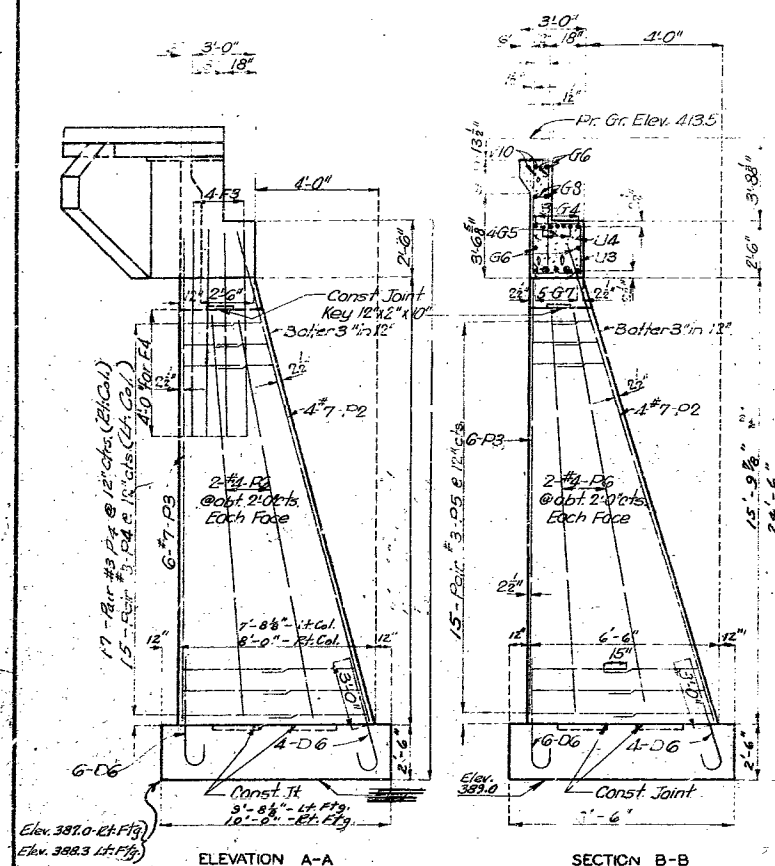
Sheet No. 1A of 3

FINAL PLANS

MS
L
S

FED. ROAD DIST. NO.	STATE	FED. RD PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
5	MO	PL38 Sec 111(2)	83		

FINAL PLANS



Note: Fil. at End Bent No.1 shall not be carried above bottom of beam and wings until super-structure span (1-2) is in place.

DETAILS OF END BENT NO. 1

Assembled Oct. 1954 by K.R.W. & W.G.S.
checked Dec. 1954 by Q.F.K.

Sheet No. 3A of 3

BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST
ABOUT 13.0 MILES N.E. OF PIEDMONT

PROJECT NO. RT 34- SEC. III (2) STA. 642+30

WAYNE COUNTY

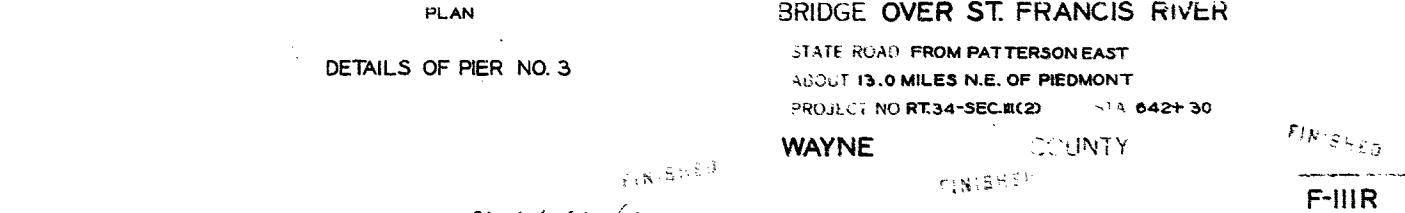
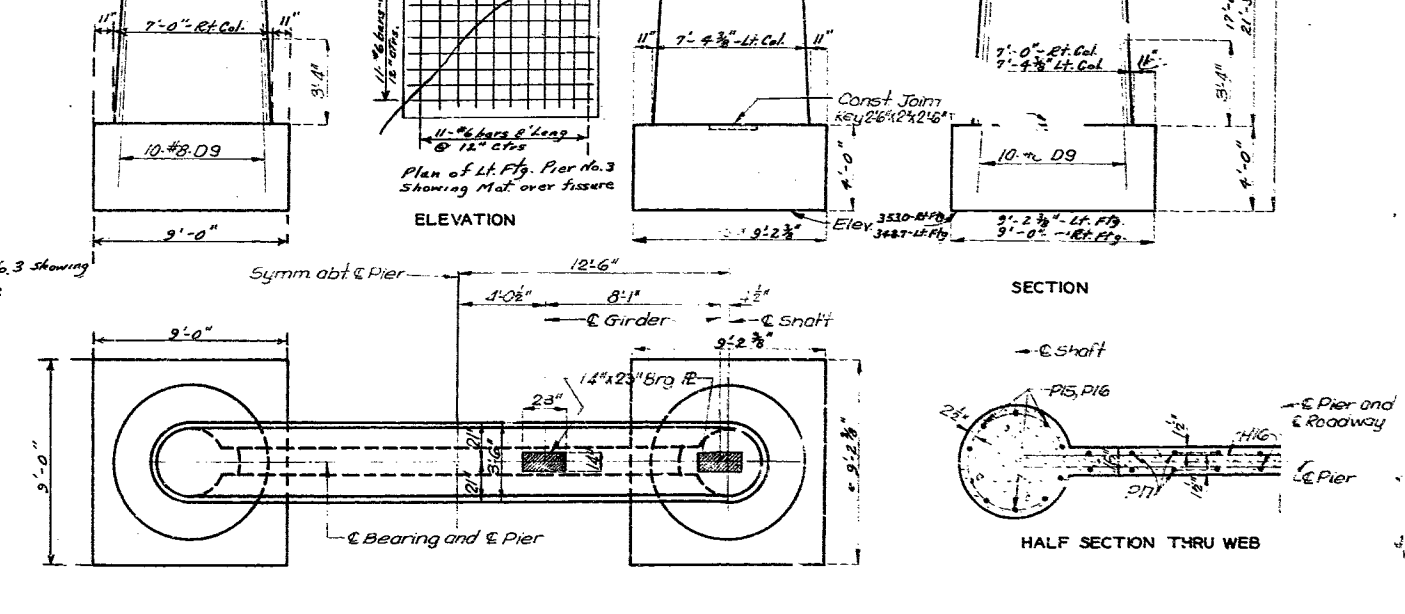
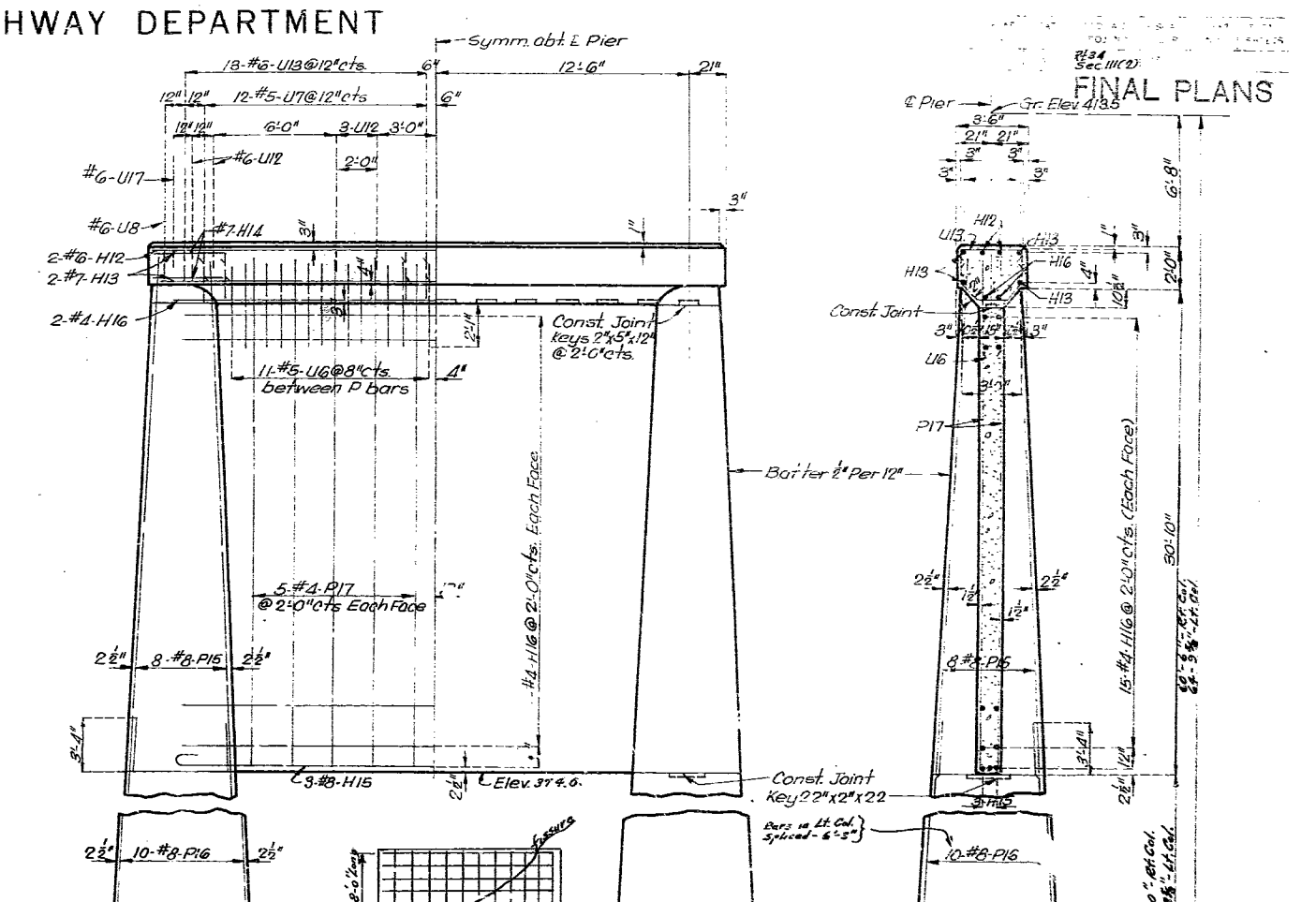
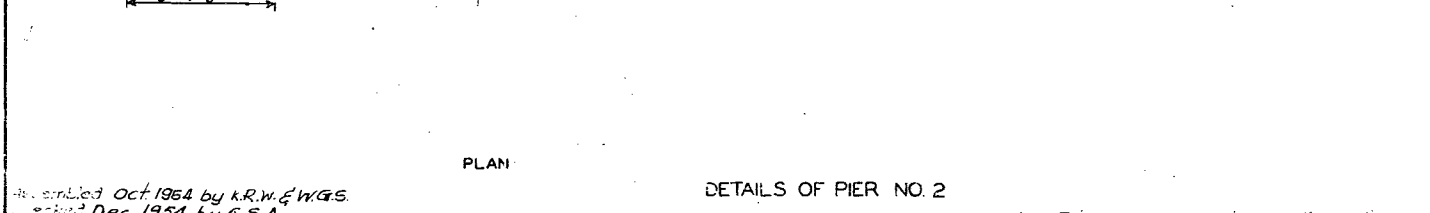
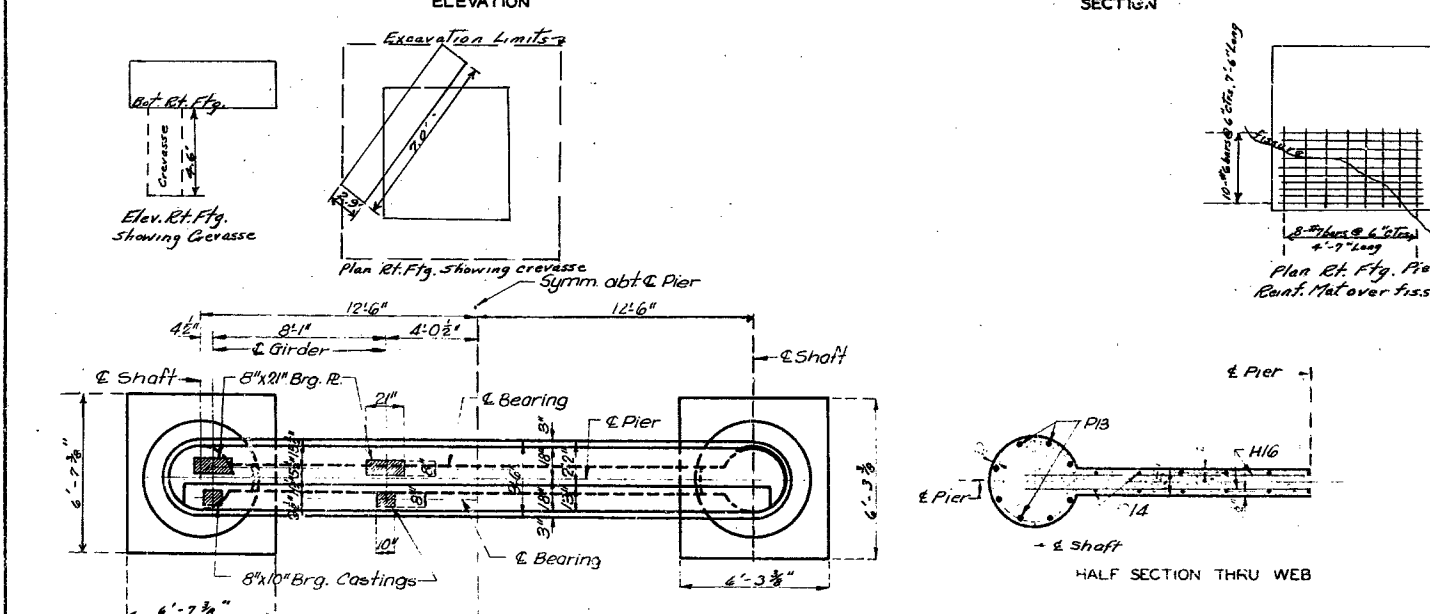
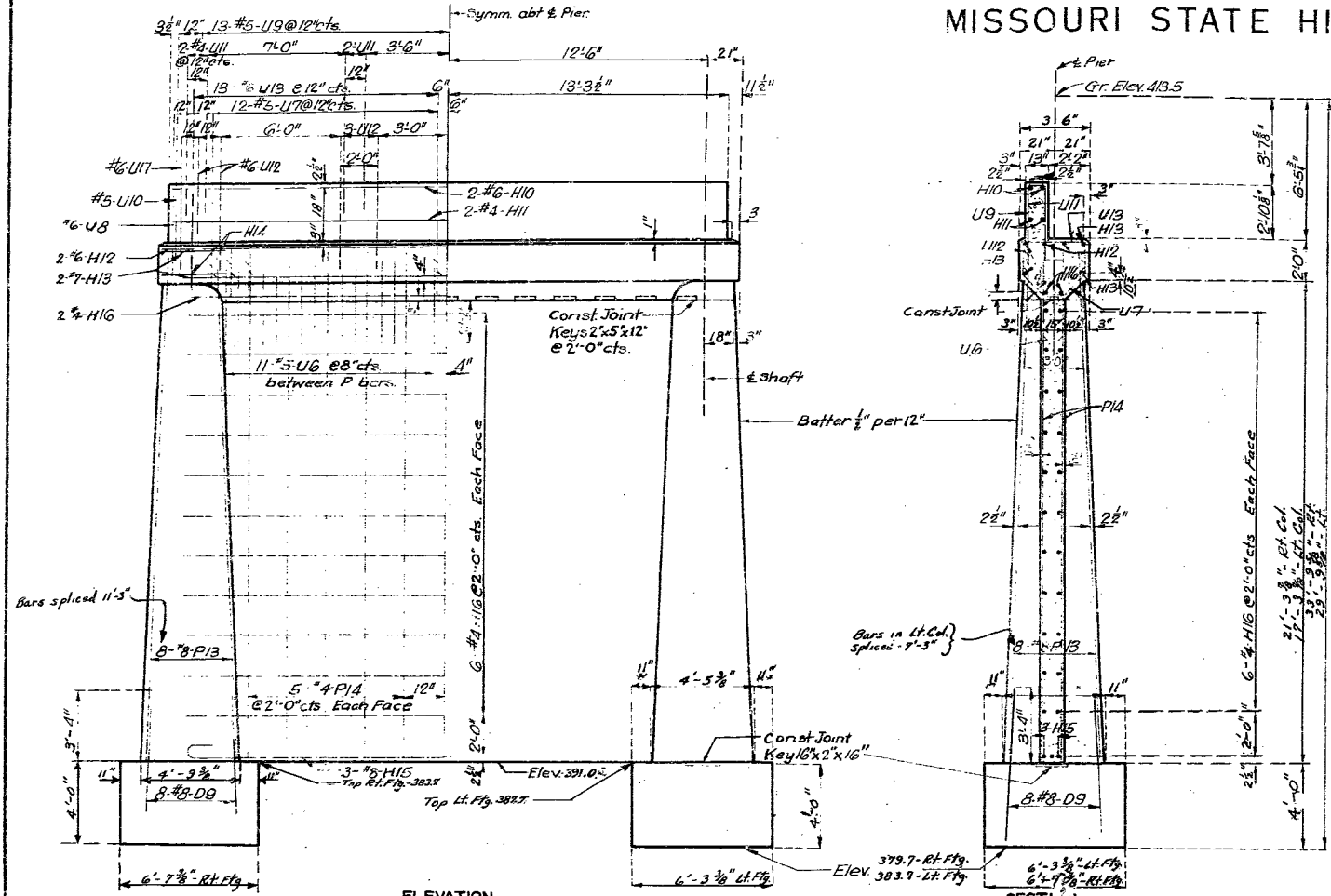
FINISHED

FINISHED

F-III R

FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT



BRIDGE OVER ST. FRANCIS RIVER

STATE ROAD FROM PATTERSON EAST
ABOUT 13.0 MILES N.E. OF PIEDMONT
PROJECT NO RT.34-SEC. III(2) STA 642+30

WAYNE COUNTY

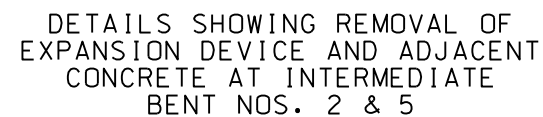
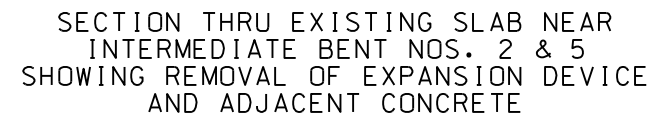
FINISHED

F-IIIIR

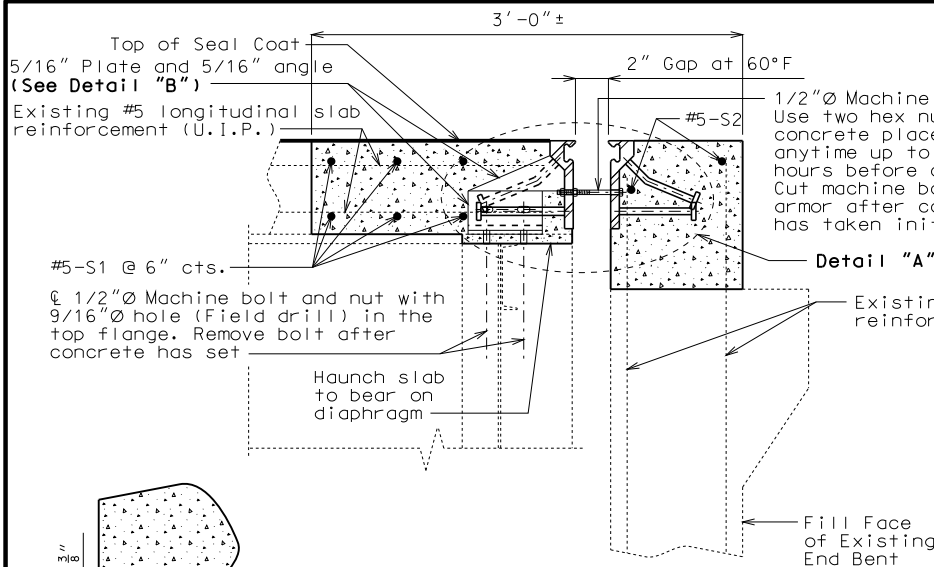
FINAL PLANS

Sheet No. 4 of 5

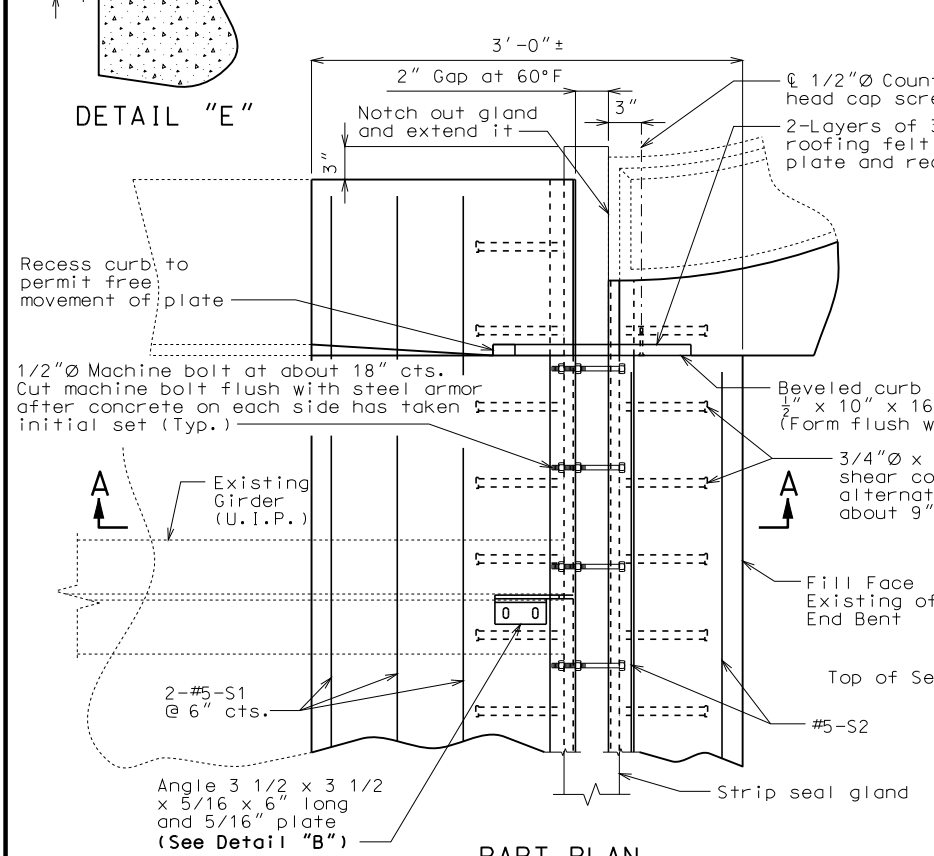
154



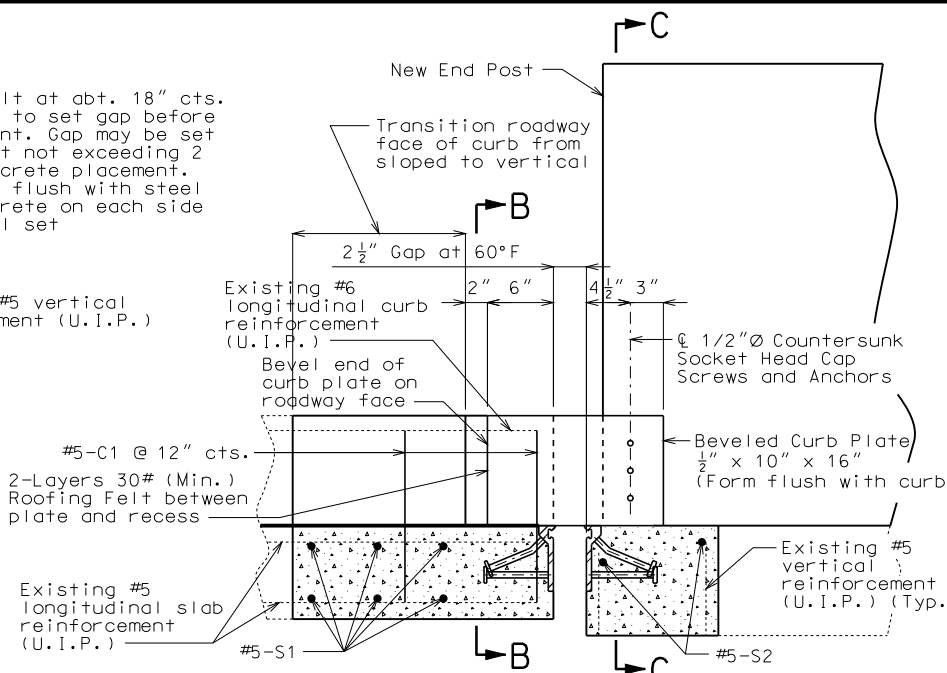
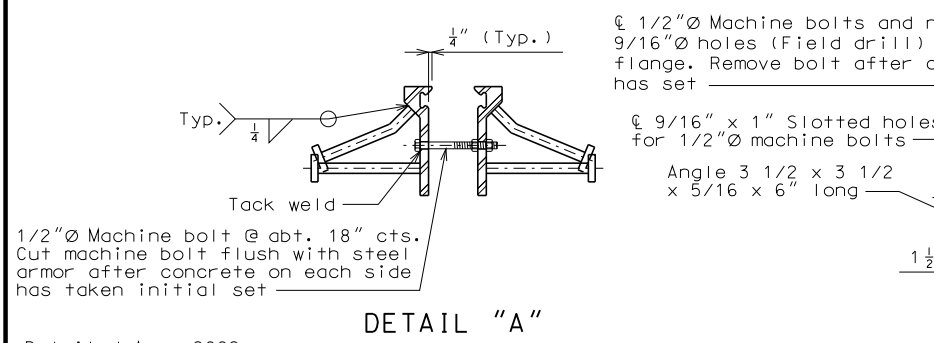
For details of Partial Removal of End Post at End Bents No. 1 and 9, see Sheets No. 5 & 6.



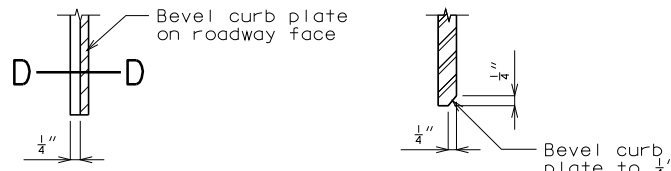
SECTION A-A
Note: Strip seal gland not shown for clarity.



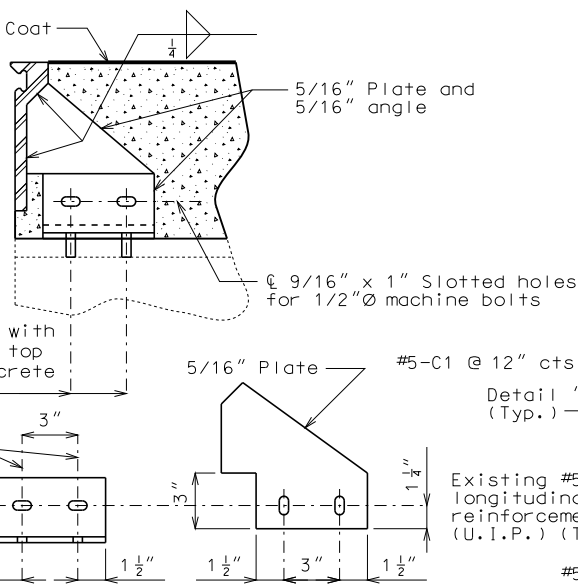
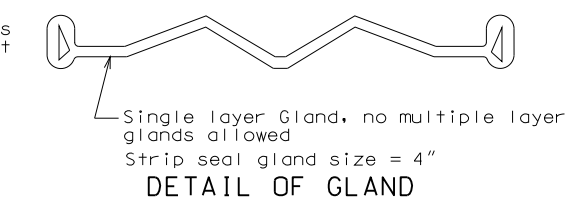
Note: Existing longitudinal slab reinforcement not shown for clarity.
Existing end bent backwall vertical reinforcement not shown for clarity.



PART ELEVATION OF CURB
Note: Strip seal gland not shown for clarity.
Handrail not shown for clarity.
Existing end post not shown for clarity.



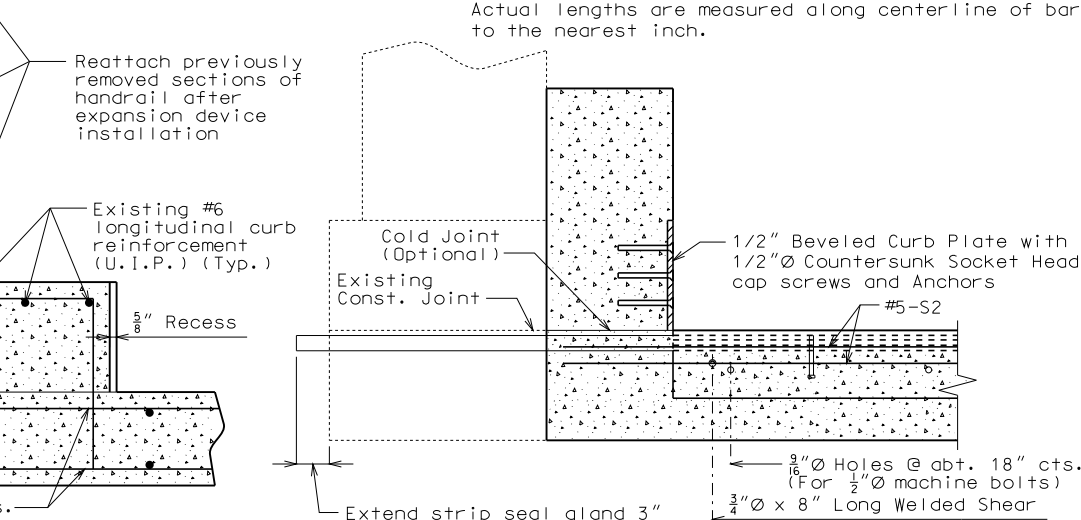
PART ELEVATION AT END OF BEVELED CURB PLATE



DETAILS OF STRIP SEAL AT END BENT NO. 9

Note: This drawing is not to scale. Follow dimensions.

DETAIL OF JOINT ARMOR



PART SECTION C-C

Note: For end post reinforcement, see Sheet No. 6.

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for stage construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system and curb plate shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Plan dimensions are based on installation at 60°F. The expansion gap and other dimensions shall be increased or decreased 1/8" for each 10° fall or rise in temperature at installation.

Longitudinal reinforcing steel shall be cut (if necessary) so that ends shall not be more than 1" from vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

Curb plate anchors shall be a drilled cone expansion or a cast-in-place wing type threaded insert. The minimum ultimate pullout capacity for these anchors shall be 2700 lbs in f'c = 4000 psi concrete. Lead anchors will not be permitted. Holes in the curb for anchors shall not be drilled until the concrete is at least 7 days old.

Shift S-bars where necessary to clear shear connector studs on the expansion joint system.

For details of end post replacement, see Sheet No. 6.

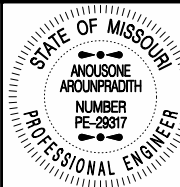
The contractor shall use a mechanical bar splice for #5-S1 and #5-S2 bars at the edge of slab between construction stages. The total bar lengths for bars indicated in the bill of reinforcing steel are determined based on the end of the bars being located flush to the face of the construction joint. No additional payment will be made for any additional bar lengths required for the mechanical bar splices. Mechanical bar splices shall be in accordance with Sec 706 except that no measurement will be made for mechanical bar splice and will be considered completely covered by the contract unit price for the reinforcing steel.

BILL OF REINFORCING STEEL					BENDING DIAGRAM
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE		
4	5 C1	3'-3 1/2"	10		 SHAPE 20
12	5 S1	14'-3"	20		
4	5 S2	13'-8"	20		

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual lengths are measured along centerline of bar to the nearest inch.



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED
5/15/2009

ROUTE
34

STATE
MO

DISTRICT
BR

SHEET NO.
4

COUNTY
WAYNE

JOB NO.
JOP0876

CONTRACT ID.

PROJECT NO.

BRIDGE NO.
F01112

DESCRIPTION

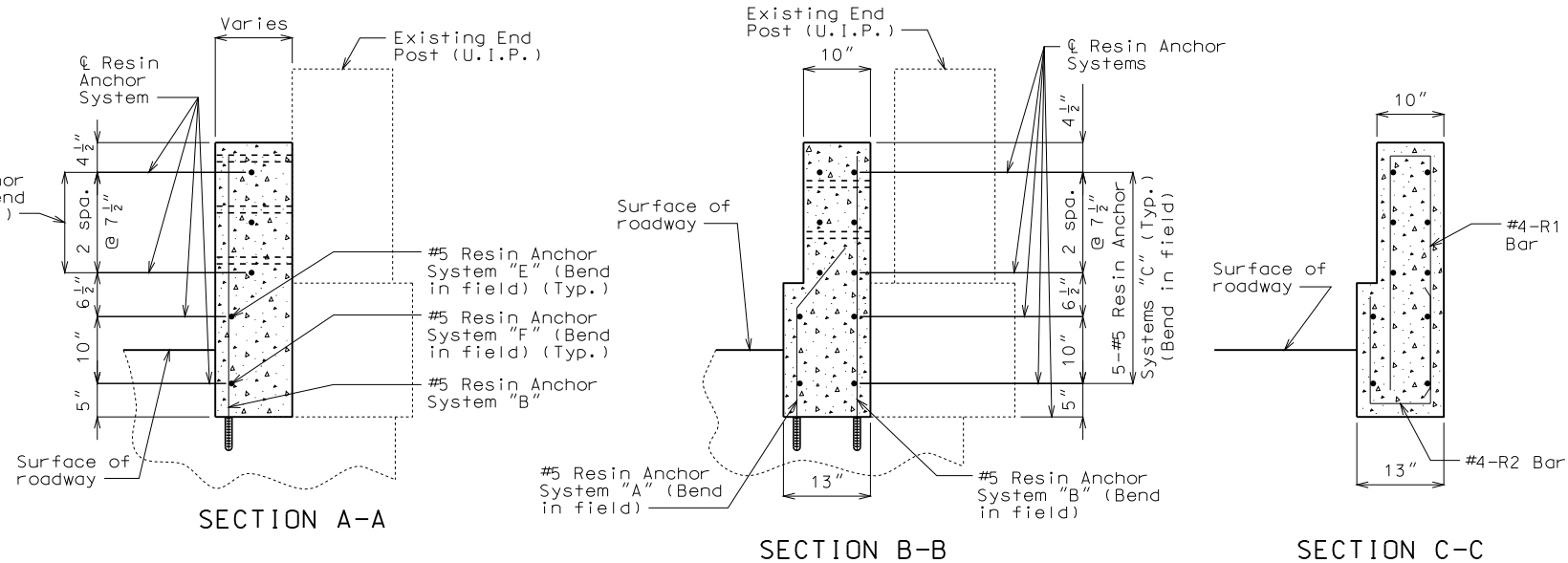
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

REVISION



Technical drawing of Detail "A" showing a cross-section of a concrete curb and roadway. The curb has a total width of 20 inches. It features 4 1-inch diameter holes spaced at 3 13/16 inches center-to-center, with a 2 3/8 inch gap from the left edge. The curb is 21 inches high. The roadway surface is indicated by a dashed line. Dimensions for the curb top are 20 inches, 8 inches, and 3 inches. The roadway surface is 1 inch from the curb edge.

DETAIL "A"

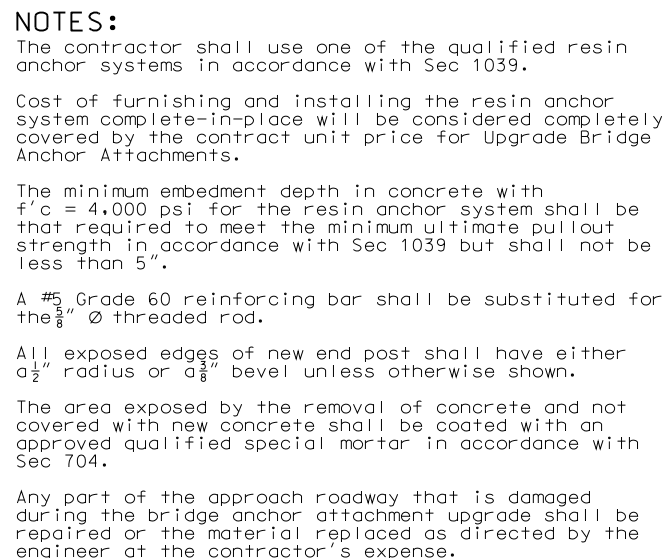
System "A"
(2 Required)

System "B"
(12 Required)

System "C"
(10 required)

System "D"
(6 required)

System "E"
(2 required)



BILL OF REINFORCING STEEL					
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE	BENDING DIAGRAM	
8	4 R1	6'-4"	10	<p>SHAPE 10</p>	
4	4 R2	3'-5"	10		
2	4 R3	3'-1"	20		

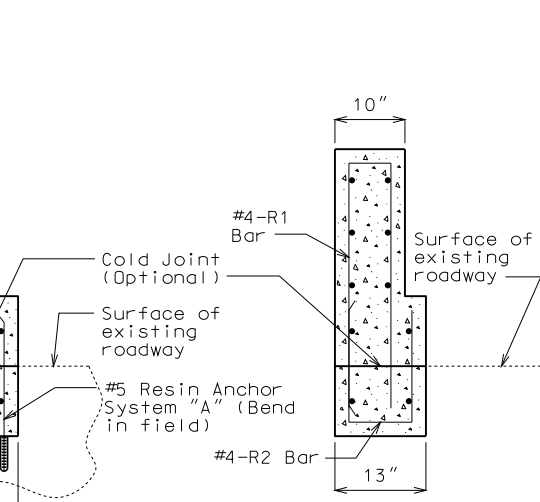
All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

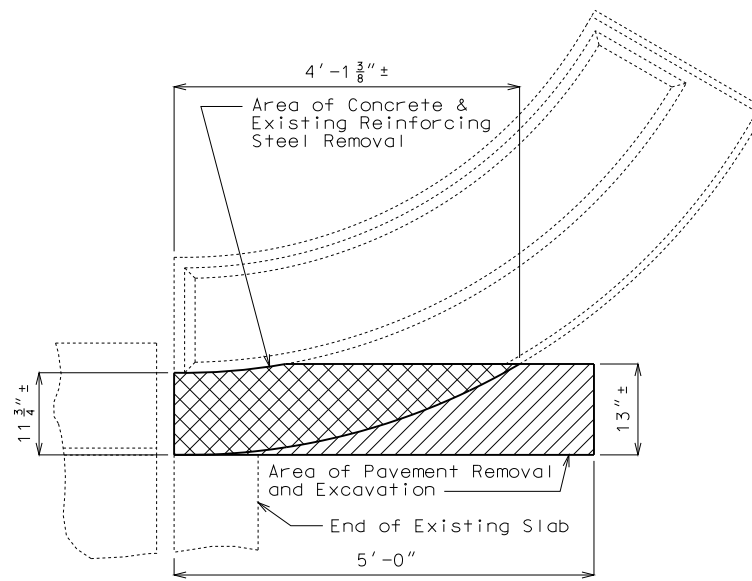
Actual lengths are measured along centerline of bar to the nearest inch.

DETAILS OF RESIN ANCHOR SYSTEMS

* Manufacturer's embedment length (5" min. into sound concrete)



SECTION C-C



System "A"
(2 Required)

System "B"
(12 Required)

System "C"
(10 required)

System "D"
(6 required)

System "E"
(2 required)

System "F"
(2 required)



NOTES:

The contractor shall use one of the qualified resin anchor systems in accordance with Sec 1039.

Cost of furnishing and installing the resin anchor system complete-in-place will be considered completely covered by the contract unit price for Upgrade Bridge Anchor Attachments.

The minimum embedment depth in concrete with $f'c = 4,000$ psi for the resin anchor system shall be that required to meet the minimum ultimate pullout strength in accordance with Sec 1039 but shall not be less than 5".

A #5 Grade 60 reinforcing bar shall be substituted for the $\frac{3}{8}$ " \emptyset threaded rod.

All exposed edges of new end post shall have either a $\frac{1}{2}$ " radius or a $\frac{3}{8}$ " bevel unless otherwise shown.

The area exposed by the removal of concrete and not covered with new concrete shall be coated with an approved qualified special mortar in accordance with Sec 704.

Any part of the approach roadway that is damaged during the bridge anchor attachment upgrade shall be repaired or the material replaced as directed by the engineer at the contractor's expense.

BILL OF REINFORCING STEEL				BENDING DIAGRAM	
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE		
8	4 R1	6'-4"	10	<p>SHAPE 10</p>	
4	4 R2	3'-5"	10		
2	4 R3	3'-1"	20		

Actual lengths are measured along centerline of bar to the nearest inch.

DETAILS OF RESIN ANCHOR SYSTEMS

* Manufacturer's embedment length
(5" min. into sound concrete)

"THIS MEDIA SHOULD
NOT BE CONSIDERED
A CERTIFIED
DOCUMENT."

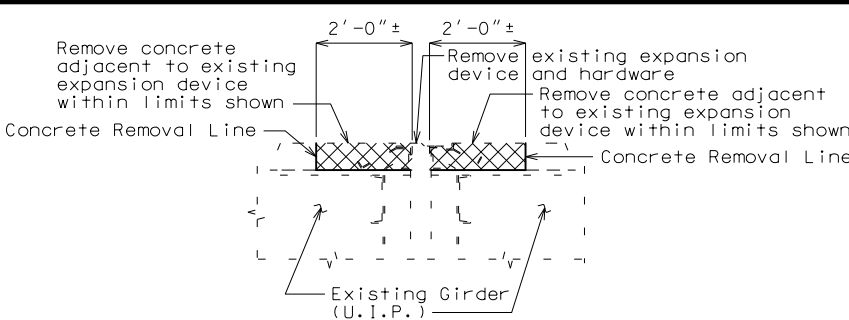
FINAL PLANS

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
-888-ASK-MODOT (1-888-275-6636)

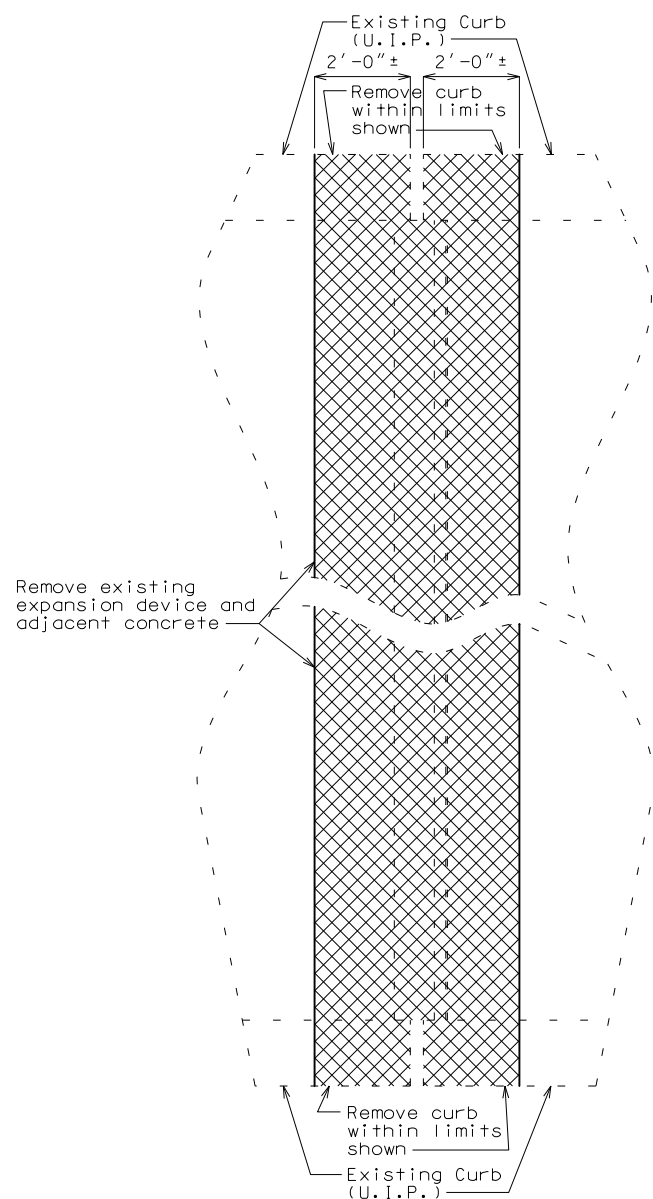


105 WEST CAPITOL
JEFFERSON CITY, MO 65102
-888-ASK-MODOT (1-888-275-6636)

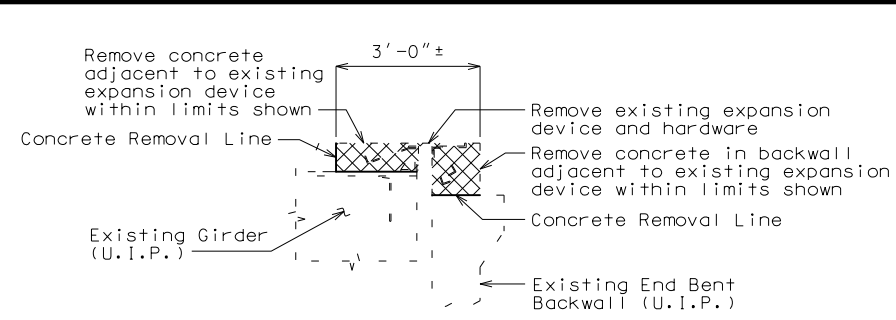
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



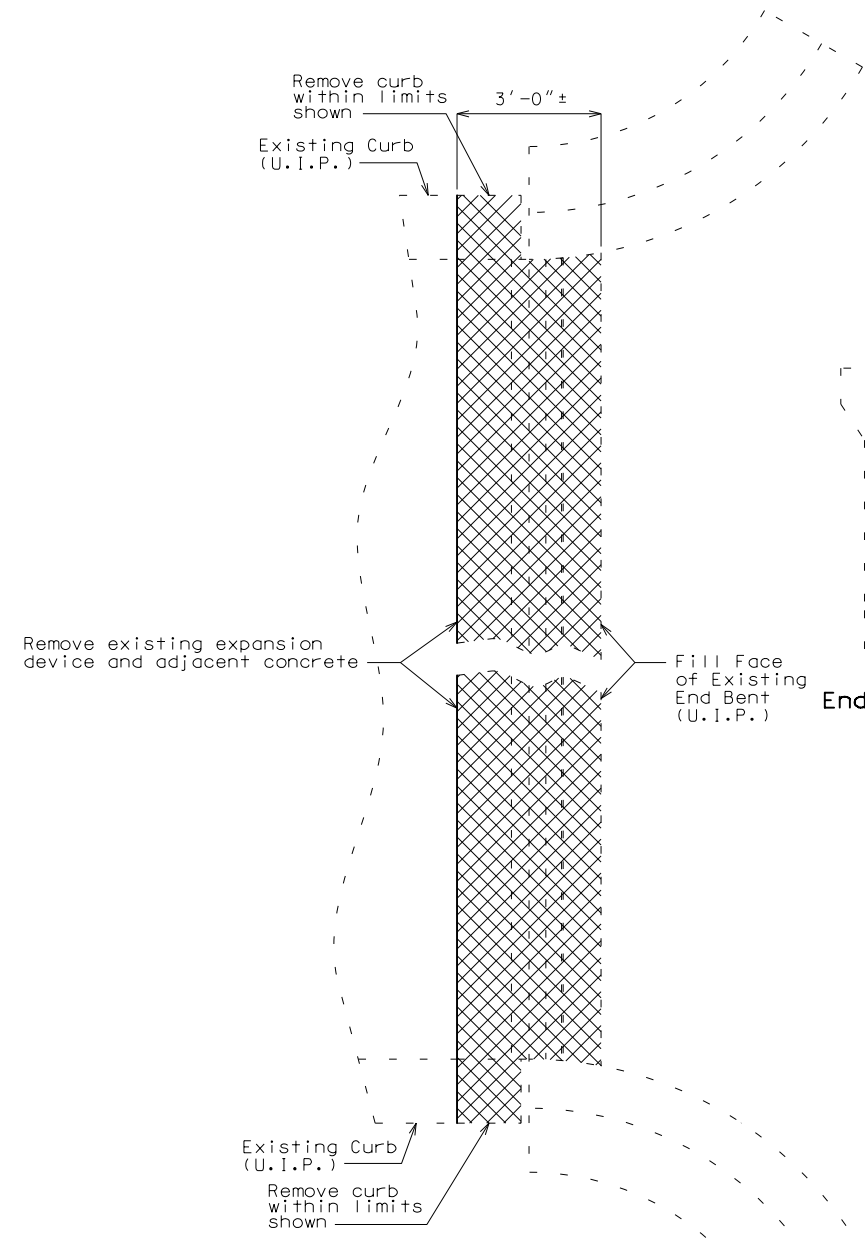
SECTION THRU EXISTING SLAB NEAR
INTERMEDIATE BENT NOS. 2 & 5
SHOWING REMOVAL OF EXPANSION DEVICE
AND ADJACENT CONCRETE



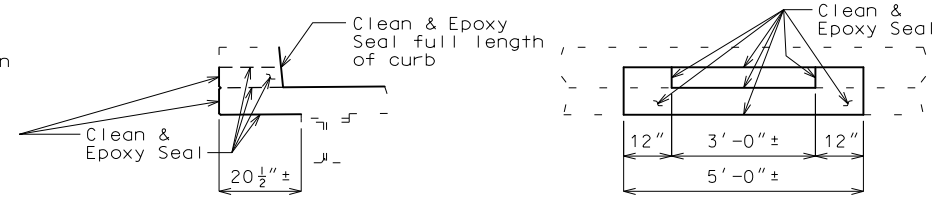
DETAILS SHOWING REMOVAL OF
EXPANSION DEVICE AND ADJACENT
CONCRETE AT INTERMEDIATE
BENT NOS. 2 & 5



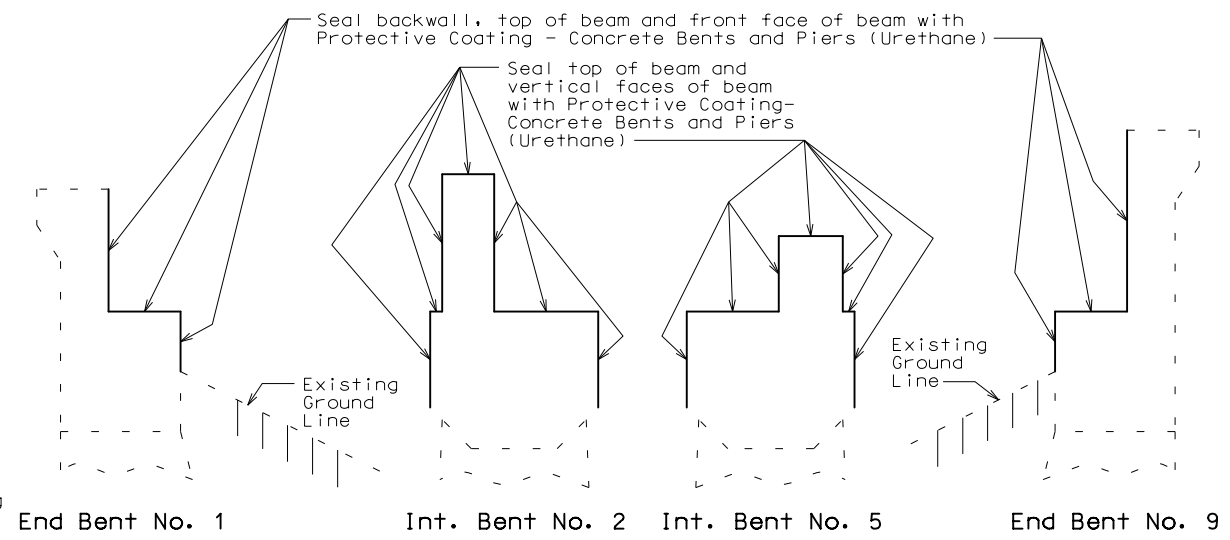
SECTION THRU EXISTING END BENT NO. 9
SHOWING REMOVAL OF EXPANSION DEVICE
AND ADJACENT CONCRETE



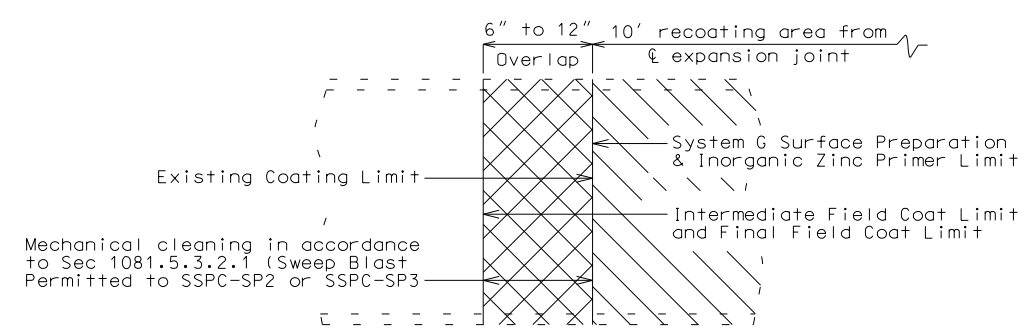
DETAILS SHOWING REMOVAL OF EXPANSION DEVICE
AND ADJACENT CONCRETE AT END BENT NO. 9



PART SECTION OF
EXISTING CURB OUTLET
PART ELEVATION OF
EXISTING CURB OUTLET
DETAILS SHOWING LIMITS OF CLEAN AND EPOXY SEAL
NOTE: Epoxy Polymer Overlay not shown for clarity.
Existing bridge rail not shown for clarity.



DETAILS OF CONCRETE PROTECTIVE COATING



PART ELEVATION SHOWING LIMITS OF PAINT OVERLAP
(Vertical or horizontal paint limit. Horizontal limit shown)

NOTES:
For details of Strip Seal Expansion Device at Intermediate Bents No. 2 & 5, see Sheet No. 3.
For details of Strip Seal Expansion Device at End Bent No. 9, see Sheet No. 4.
For details of Partial Removal of End Post at End Bents No. 1 and 9, see Sheets No. 5 & 6.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 2/1/2012

ROUTE 34 STATE MO

DISTRICT BR SHEET NO. 2

COUNTY WAYNE

JOB NO. JOP0876

CONTRACT ID. 090626-X04

PROJECT NO. FAF-34-1(35)

BRIDGE NO. F01112

DESCRIPTION

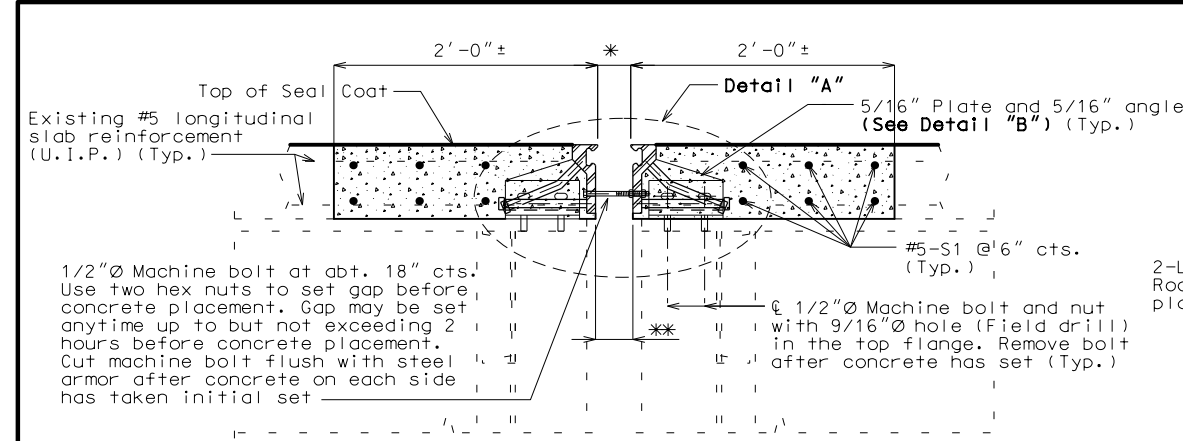
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

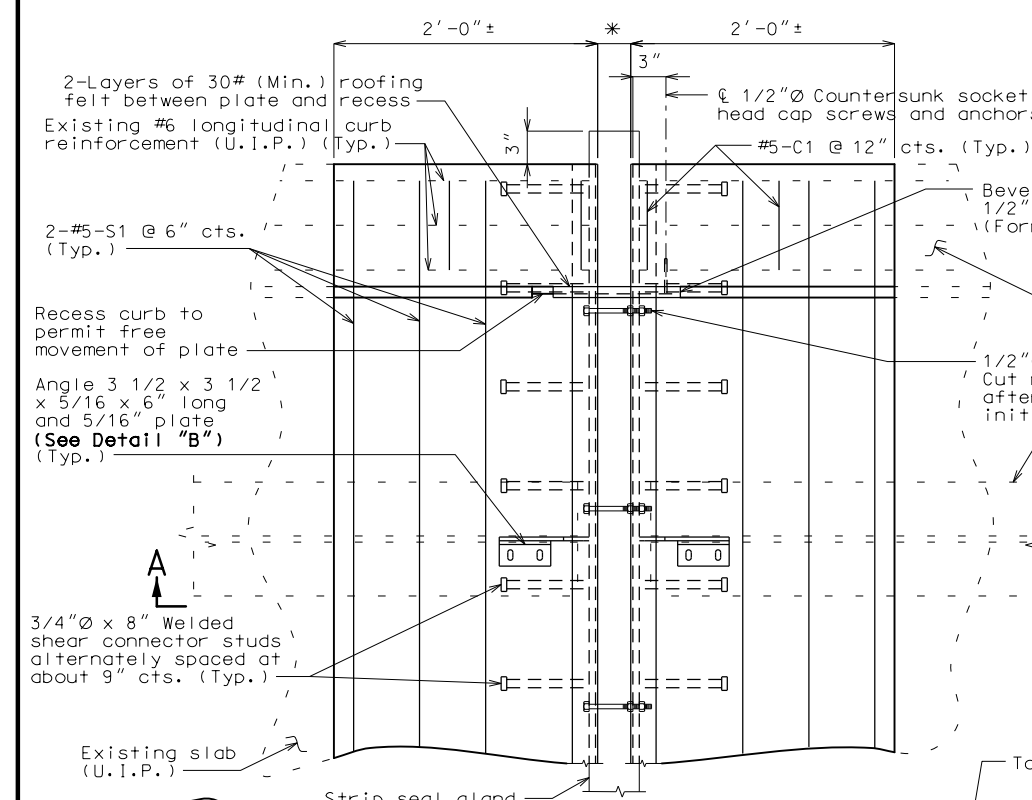
FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



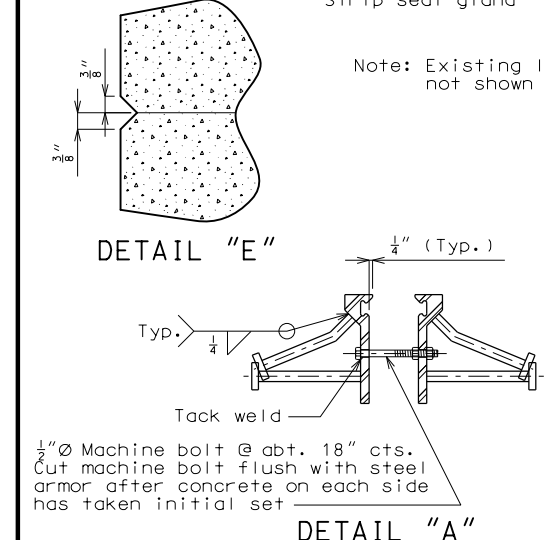
SECTION A-A

Note: Strip seal gland not shown for clarity.

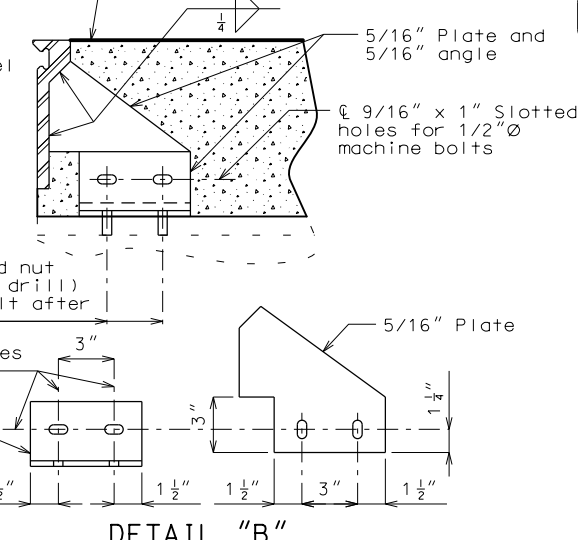


PART PLAN

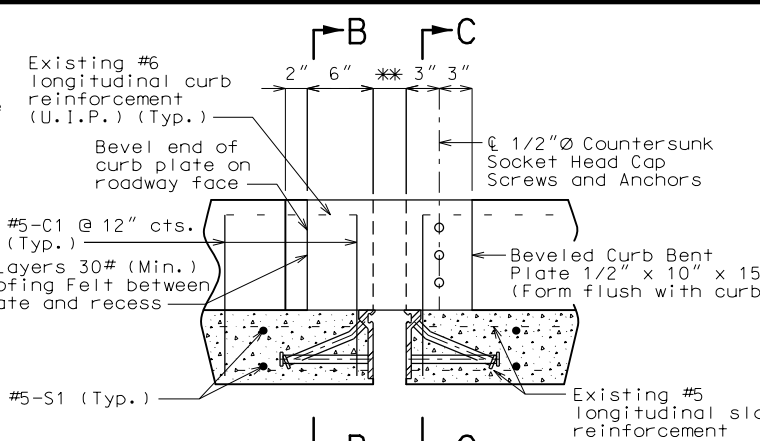
Note: Existing longitudinal reinforcing steel not shown for clarity.



DETAIL "E"



DETAIL "B"

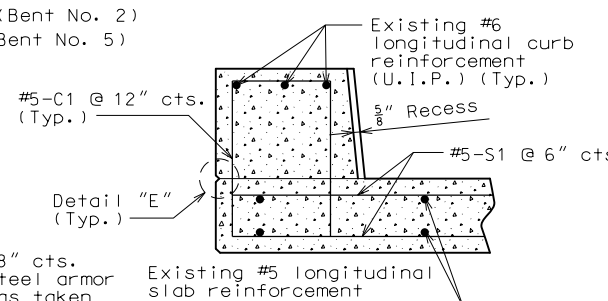


PART ELEVATION OF CURB

Notes: Strip seal gland not shown for clarity.

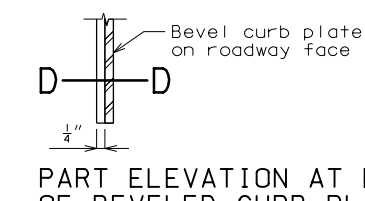
Handrail not shown for clarity.

* 2" Gap at 60°F (Bent No. 2)
2 1/2" Gap at 60°F (Bent No. 5)
* 2 1/2" Gap at 60°F (Bent No. 2)
3" Gap at 60°F (Bent No. 5)

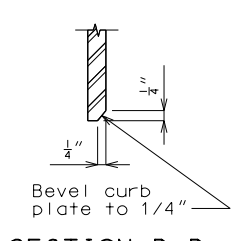


PART SECTION B-B

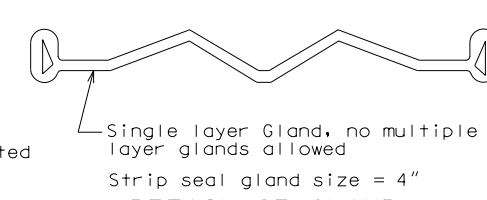
Note: Handrail not shown for clarity.



PART ELEVATION AT END OF BEVELED CURB PLATE



SECTION D-D



DETAIL OF GLAND

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for stage construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system and curb plate shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Plan dimensions are based on installation at 60°F. The expansion gap and other dimensions shall be increased or decreased 3/16" for each 10° fall or rise in temperature at installation.

Longitudinal reinforcing steel shall be cut (if necessary) so that ends shall not be more than ±1" from vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

Curb plate anchors shall be a drilled cone expansion or a cast-in-place wing type threaded insert. The minimum ultimate pullout capacity for these anchors shall be 2700 lbs in f'c = 4000 psi concrete. Lead anchors will not be permitted. Holes in the curb for anchors shall not be drilled until the concrete is at least 7 days old.

The contractor shall use a mechanical bar splice for #5-S1 bars at the edge of slab between construction stages. The total bar lengths for bars indicated in the bill of reinforcing steel are determined based on the end of the bars being located flush to the face of the construction joint. No additional payment will be made for any additional bar lengths required for the mechanical bar splices. Mechanical bar splices shall be in accordance with Sec 706 except that no measurement will be made for mechanical bar splice and will be considered completely covered by the contract unit price for the reinforcing steel.

Expansion joint system shall be fabricated in one section, except for stage construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system and curb plate shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

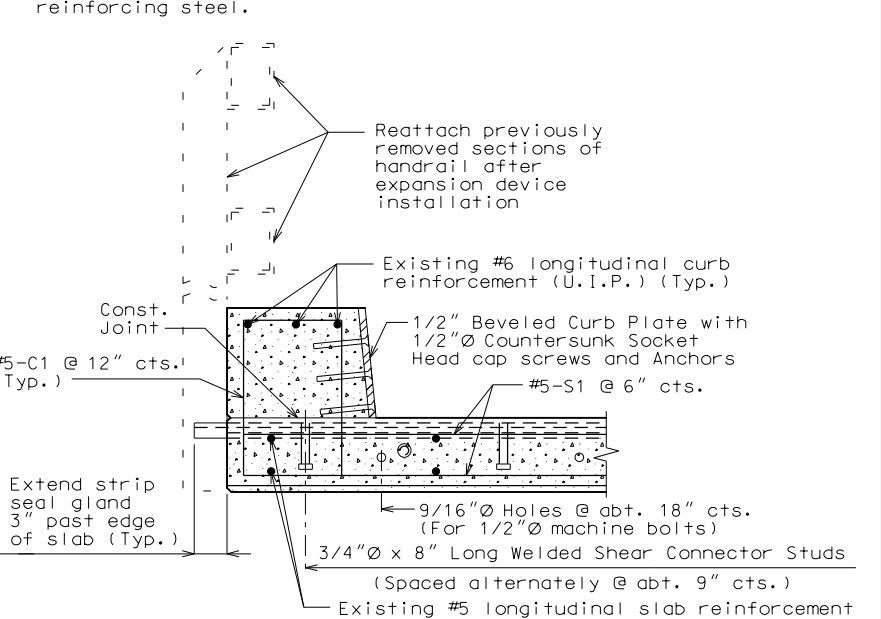
Plan dimensions are based on installation at 60°F. The expansion gap and other dimensions shall be increased or decreased 3/16" for each 10° fall or rise in temperature at installation.

Longitudinal reinforcing steel shall be cut (if necessary) so that ends shall not be more than ±1" from vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

Curb plate anchors shall be a drilled cone expansion or a cast-in-place wing type threaded insert. The minimum ultimate pullout capacity for these anchors shall be 2700 lbs in f'c = 4000 psi concrete. Lead anchors will not be permitted. Holes in the curb for anchors shall not be drilled until the concrete is at least 7 days old.

The contractor shall use a mechanical bar splice for #5-S1 bars at the edge of slab between construction stages. The total bar lengths for bars indicated in the bill of reinforcing steel are determined based on the end of the bars being located flush to the face of the construction joint. No additional payment will be made for any additional bar lengths required for the mechanical bar splices. Mechanical bar splices shall be in accordance with Sec 706 except that no measurement will be made for mechanical bar splice and will be considered completely covered by the contract unit price for the reinforcing steel.



PART SECTION C-C

BILL OF REINFORCING STEEL					
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE	BENDING DIAGRAM	
16	5 C1	3'-3 1/2"	10		SHAPE 20
48	5 S1	14'-3"	20		

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRS1 Manual of Standard Practice for Detailing Reinforced Concrete Structures. Stirrup and Tie Dimensions.

Actual lengths are measured along centerline of bar to the nearest inch.

DETAILS OF STRIP SEAL AT INTERMEDIATE BENTS NO. 2 & 5

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 6

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED
2/1/2012

ROUTE
34

STATE
MO

DISTRICT
BR

SHEET NO.
3

COUNTY
WAYNE

JOB NO.
JOP0876

CONTRACT ID
090626-X04

PROJECT NO.
FAF-34-1(35)

BRIDGE NO.
F01112

DESCRIPTION

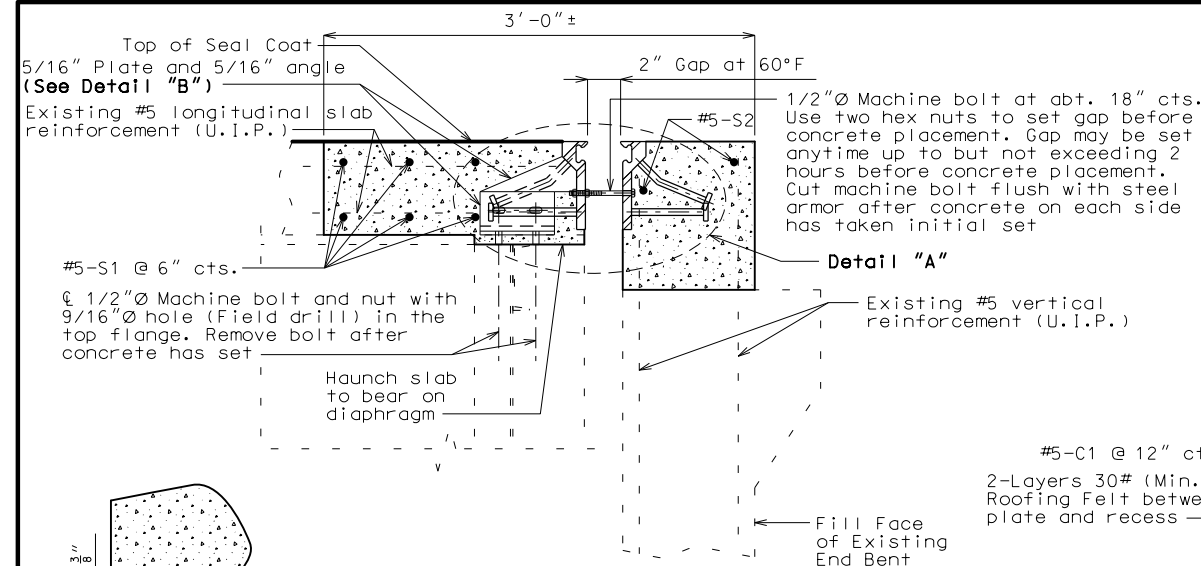
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

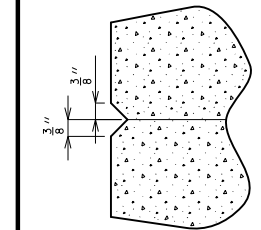
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MoDOT

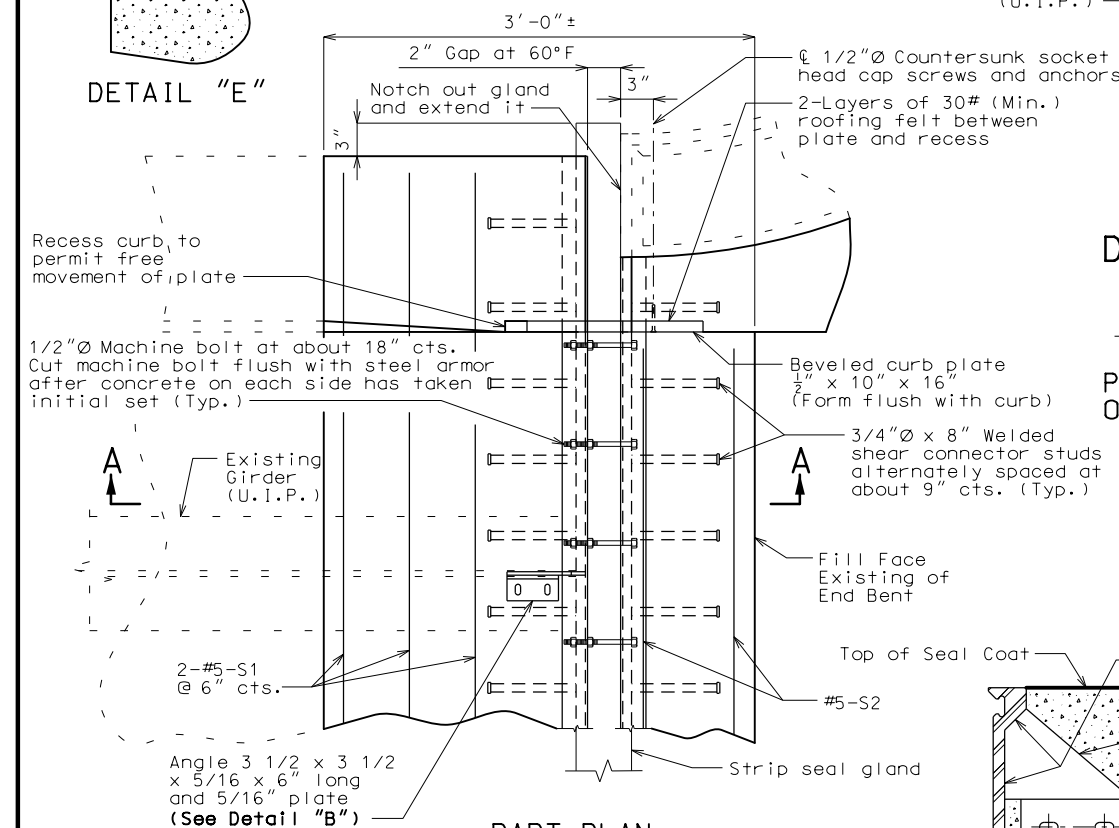
FINAL PLANS



SECTION A-A
Note: Strip seal gland not shown for clarity.



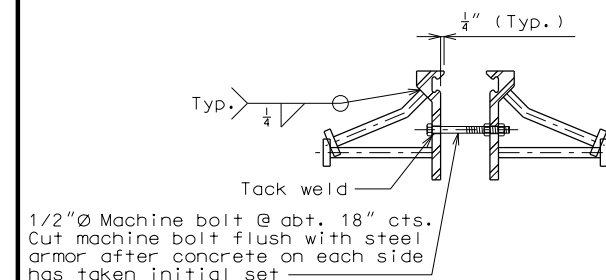
DETAIL 'E'



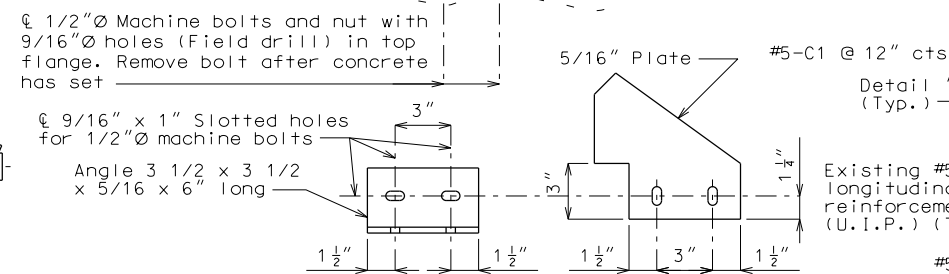
PART PLAN

Note: Existing longitudinal slab reinforcement not shown for clarity.

Existing end bent backwall vertical reinforcement not shown for clarity.



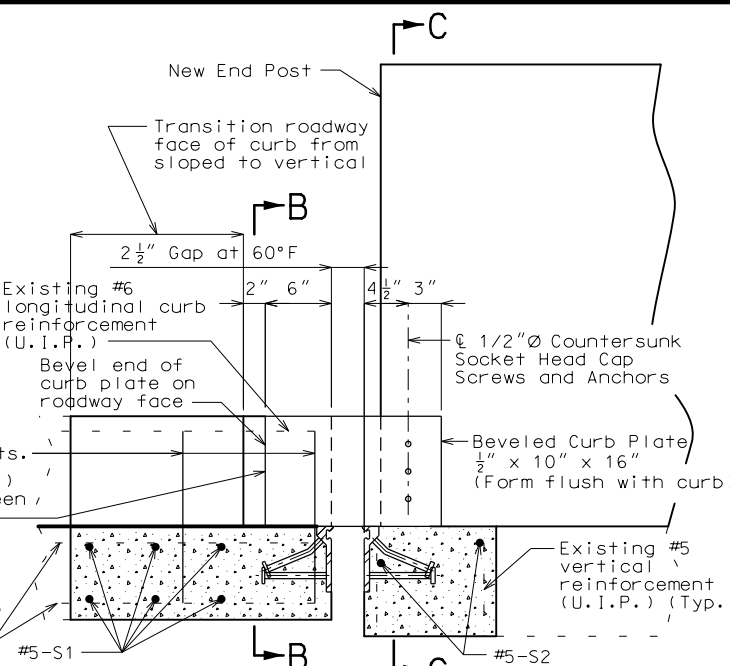
DETAIL 'A'



DETAIL 'B'

DETAILS OF STRIP SEAL AT END BENT NO. 9

Note: This drawing is not to scale. Follow dimensions.

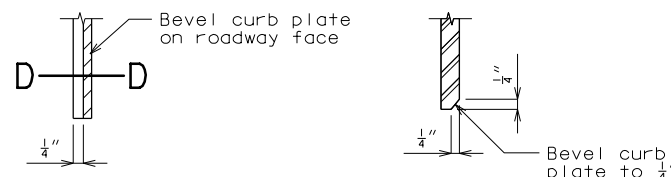


PART ELEVATION OF CURB

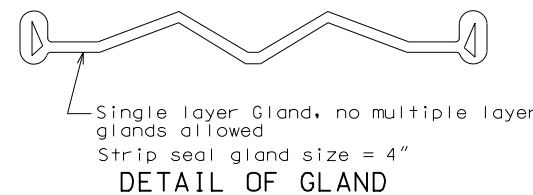
Note: Strip seal gland not shown for clarity.

Handrail not shown for clarity.

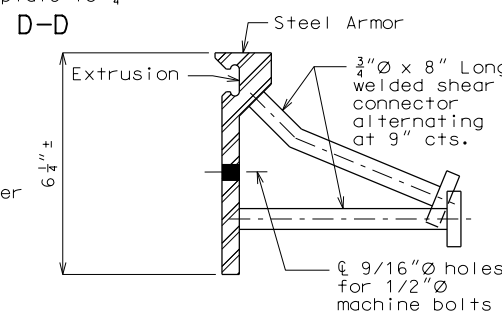
Existing end post not shown for clarity.



PART ELEVATION AT END OF BEVELED CURB PLATE



DETAIL OF GLAND



DETAIL OF JOINT ARMOR



PART SECTION B-B

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for stage construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system and curb plate shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Plan dimensions are based on installation at 60°F. The expansion gap and other dimensions shall be increased or decreased 1/8" for each 10° fall or rise in temperature at installation.

Longitudinal reinforcing steel shall be cut (if necessary) so that ends shall not be more than 1" from vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

Curb plate anchors shall be a drilled cone expansion or a cast-in-place wing type threaded insert. The minimum ultimate pullout capacity for these anchors shall be 2700 lbs in f'c = 4000 psi concrete. Lead anchors will not be permitted. Holes in the curb for anchors shall not be drilled until the concrete is at least 7 days old.

Shift S-bars where necessary to clear shear connector studs on the expansion joint system.

For details of end post replacement, see Sheet No. 6.

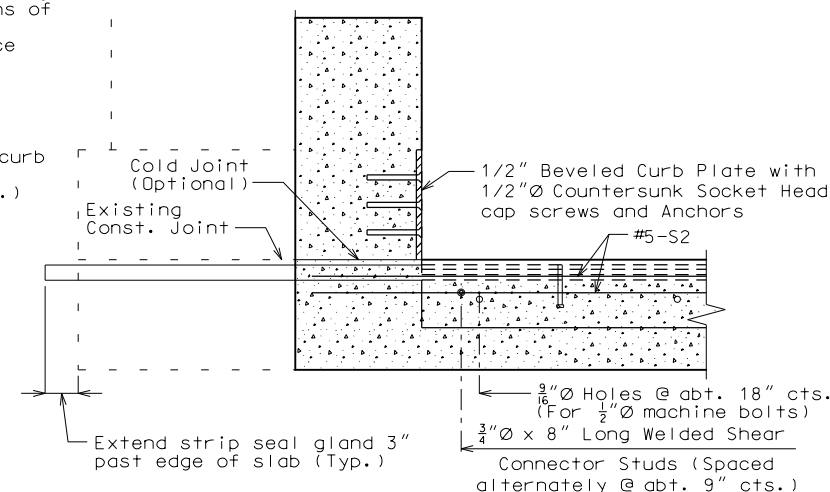
The contractor shall use a mechanical bar splice for #5-S1 and #5-S2 bars at the edge of slab between construction stages. The total bar lengths for bars indicated in the bill of reinforcing steel are determined based on the end of the bars being located flush to the face of the construction joint. No additional payment will be made for any additional bar lengths required for the mechanical bar splices. Mechanical bar splices shall be in accordance with Sec 706 except that no measurement will be made for mechanical bar splice and will be considered completely covered by the contract unit price for the reinforcing steel.

BILL OF REINFORCING STEEL					BENDING DIAGRAM	
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE			
4	5 C1	3'-3 1/2"	10			
12	5 S1	14'-3"	20			
4	5 S2	13'-8"	20			

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual lengths are measured along centerline of bar to the nearest inch.



PART SECTION C-C

Note: For end post reinforcement, see Sheet No. 6.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED

2/1/2012

ROUTE

34

DISTRICT

BR

COUNTY

WAYNE

JOB NO.

JOP0876

CONTRACT ID.

090626-X04

PROJECT NO.

FAF-34-1(35)

BRIDGE NO.

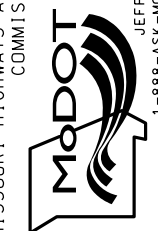
F01112

DESCRIPTION

DATE

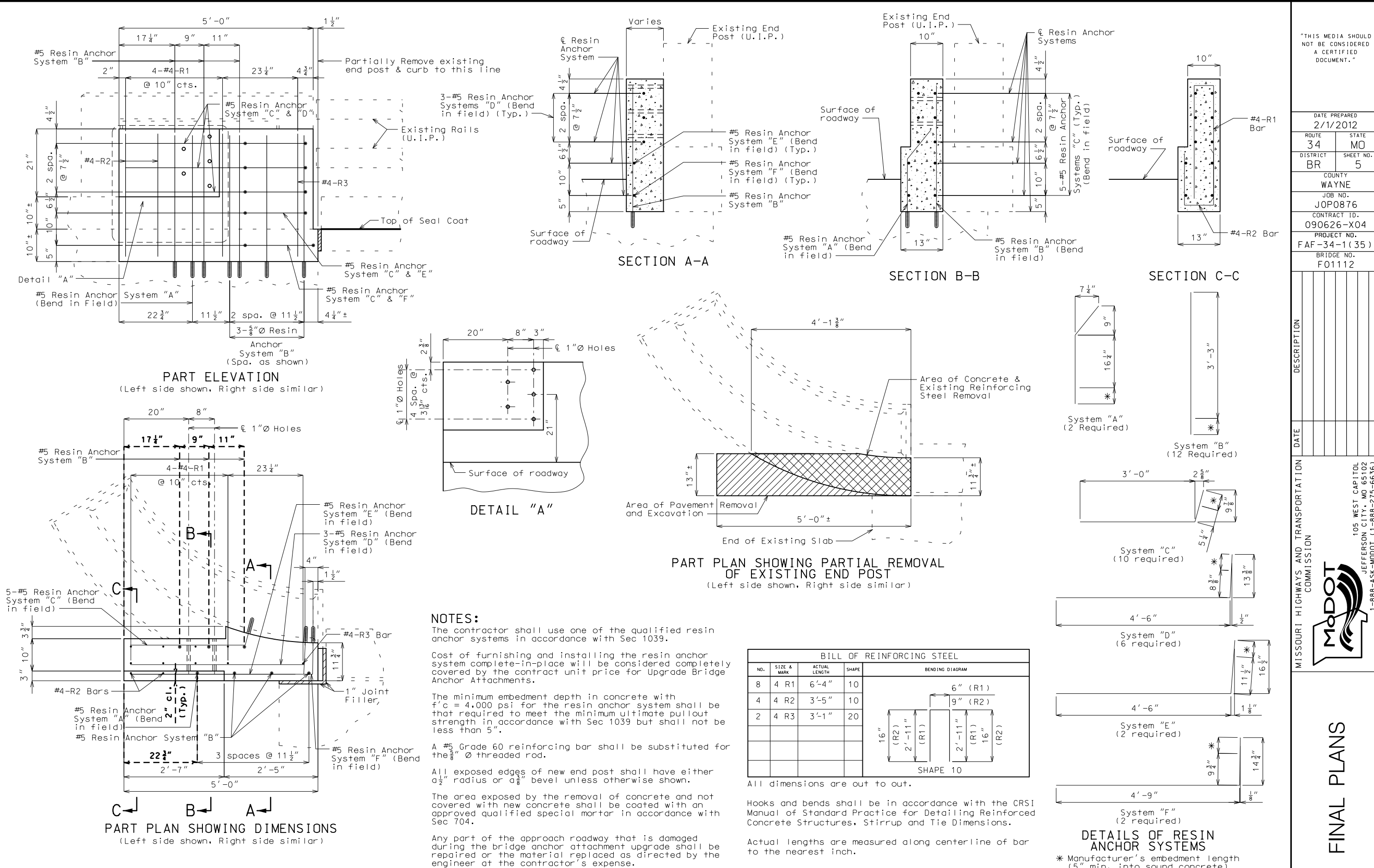
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



FINAL PLANS

REV.



"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."			
DATE PREPARED 2/1/2012			
ROUTE 34		STATE MO	
DISTRICT BR		SHEET NO. 5	
COUNTY WAYNE			
JOB NO. JOP0876			
CONTRACT ID. 090626-X04			
PROJECT NO. FAF-34-1(35)			
BRIDGE NO. F01112			
DESCRIPTION			
DATE			

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

DATE PREPARED

2/1/2012

ROUTE

34

STATE

MO

DISTRICT

BR

SHEET NO.

6

COUNTY

WAYNE

JOB NO.

JOP0876

CONTRACT ID.

090626-X04

PROJECT NO.

FAF-34-1 (35)

BRIDGE NO.

F01112

DESCRIPTION

DATE

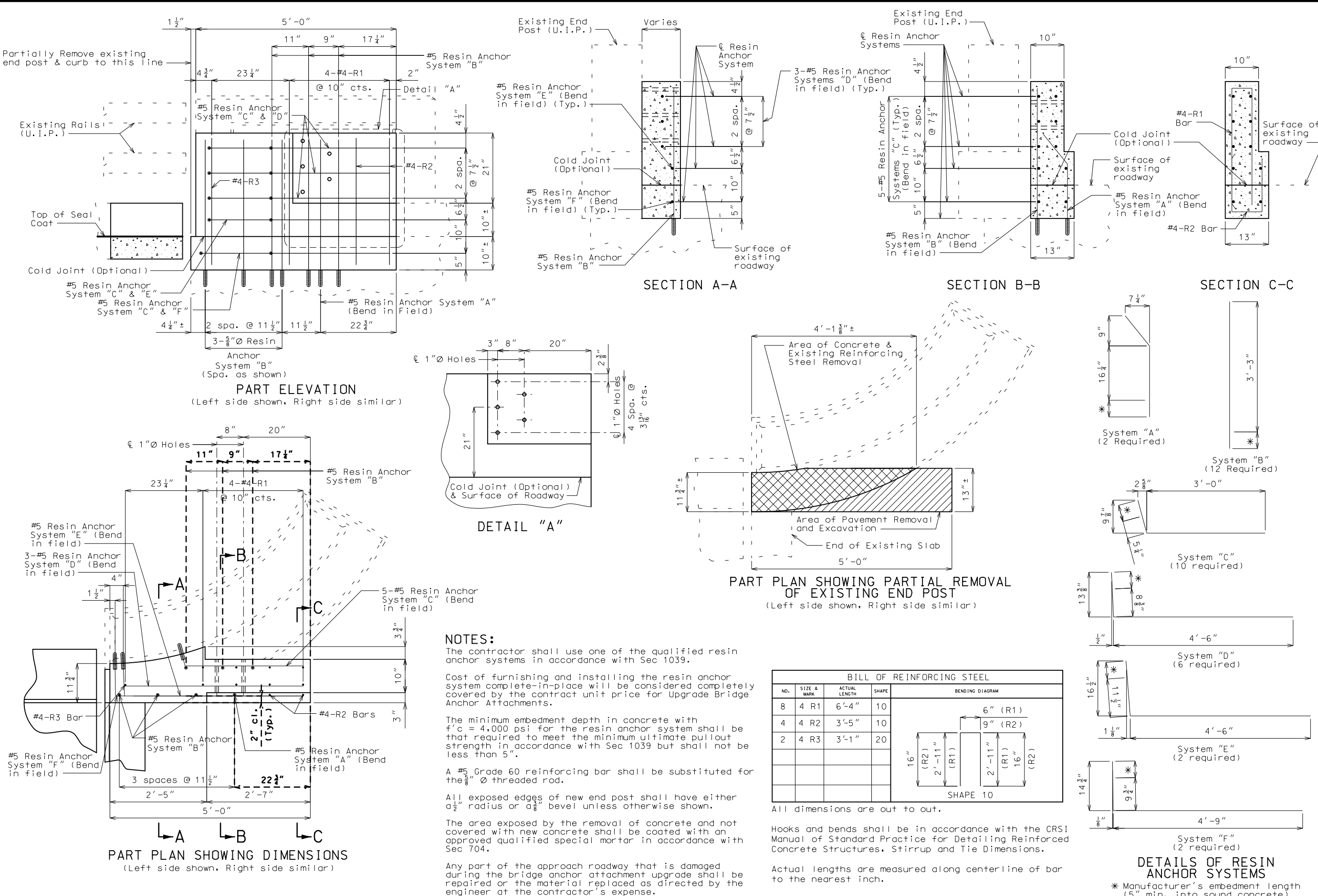
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

FINAL PLANS



"THIS MEDIA SHOULD
NOT BE CONSIDERED
A CERTIFIED
DOCUMENT."

Clean and repaint existing bridge rail with Calcium Sulfonate System (Typ.)

Remove existing seal coat

Install Seal Coat, Grade A

Remove existing expansion joints, adjacent concrete, curbs and handrail as necessary for installation of Strip Seal Expansion Joint Systems at Intermediate Bent Nos. 2 & 5 and End Bent No. 9

Repair Concrete Deck (Half-Soling)

Full Depth Repair

Full Depth Repair in Half-Soled Area

One inch vertical side shall be established outside the deteriorated area. See Sec 704.

Wearing Surface

Existing Longitudinal Steel

Existing Transverse Steel

Repairing Concrete Deck (Half-Soling) (See Sec 704.)

7" ±

One inch vertical side shall be established outside the deteriorated area. See Sec 704.

Wearing Surface

Existing Longitudinal Steel

Existing Transverse Steel

Repairing Concrete Deck (Half-Soling) and Full Depth Repair (See Sec 704)

7" ±

(1) Remove existing seal coat. Install new Seal Coat, Grade A.

DESCRIPTION

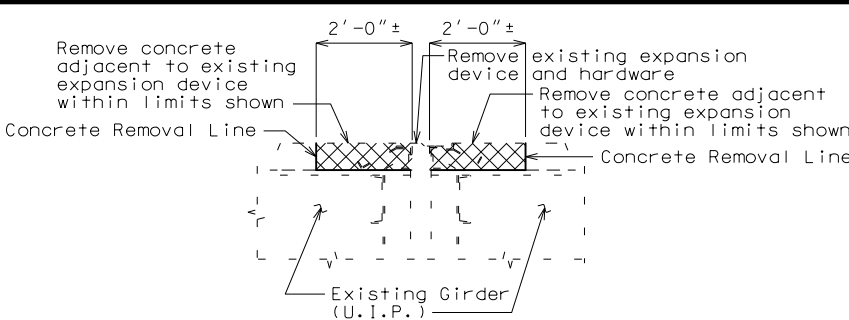
DATE _____

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

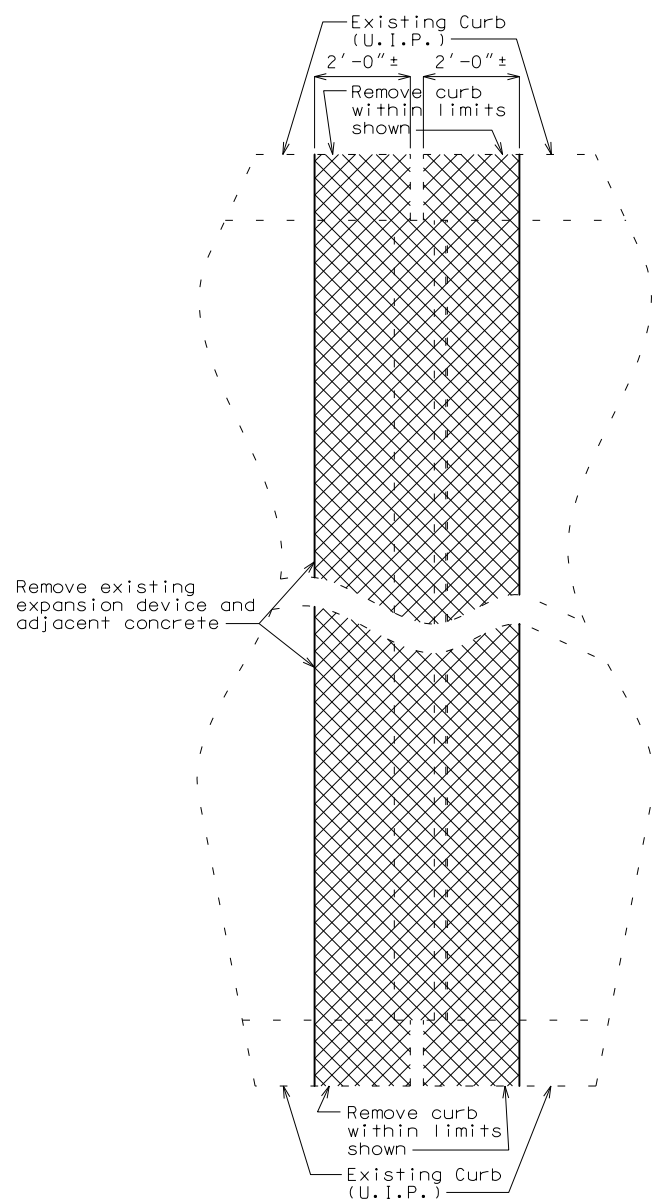
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
TEL: 573-751-4000 FAX: 573-751-4001

FINAL PLANS

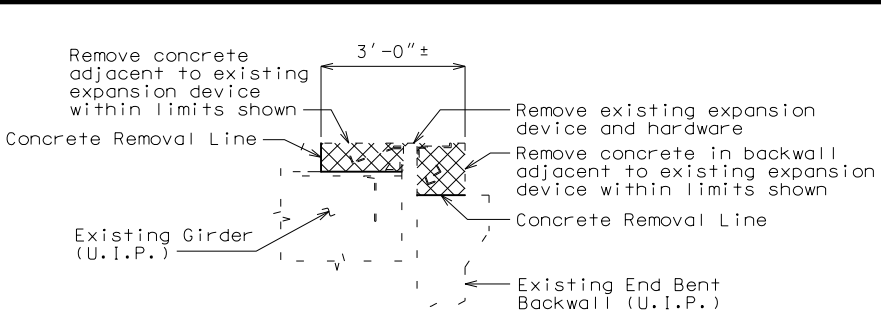
STD. 706.35



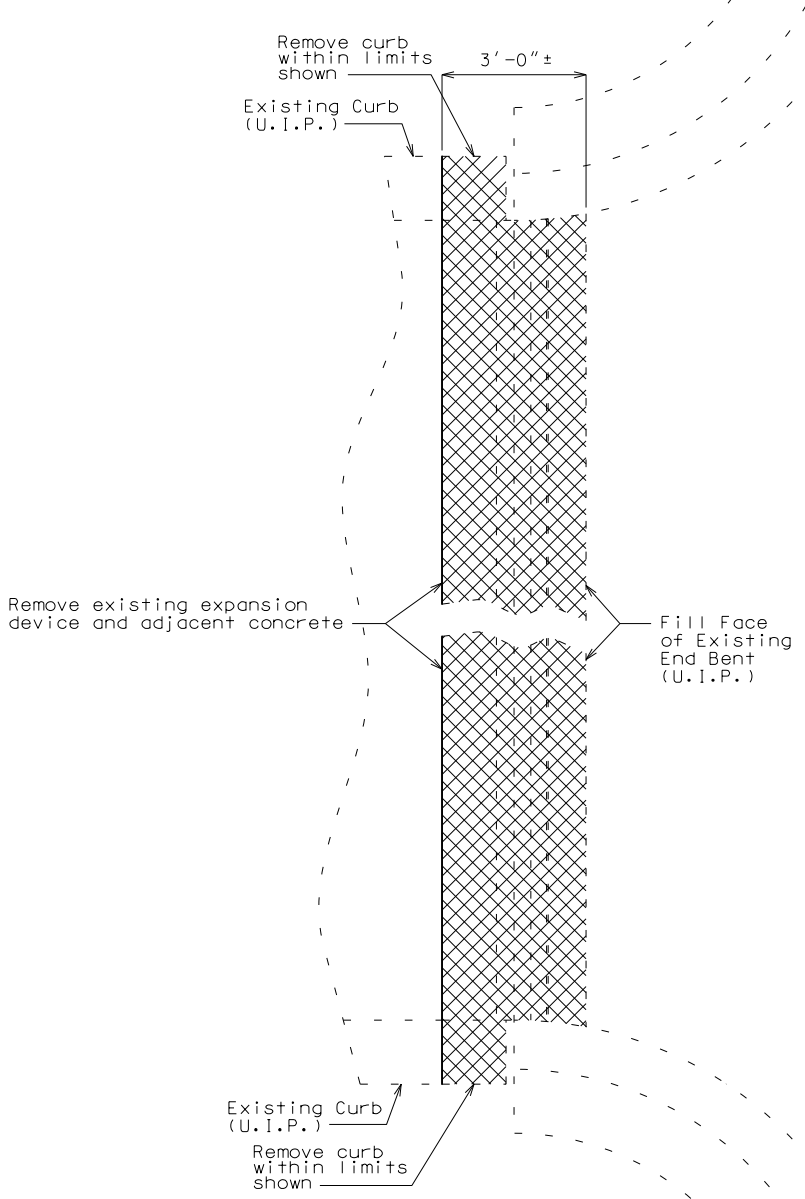
SECTION THRU EXISTING SLAB NEAR
INTERMEDIATE BENT NOS. 2 & 5
SHOWING REMOVAL OF EXPANSION DEVICE
AND ADJACENT CONCRETE



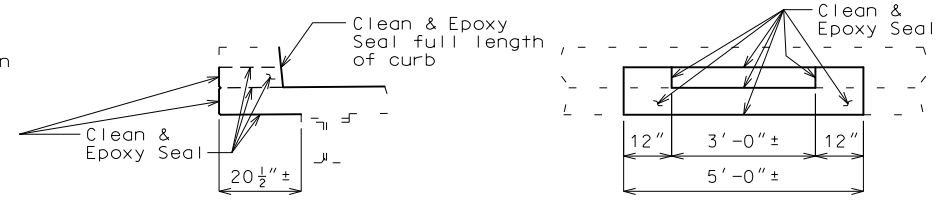
DETAILS SHOWING REMOVAL OF
EXPANSION DEVICE AND ADJACENT
CONCRETE AT INTERMEDIATE
BENT NOS. 2 & 5



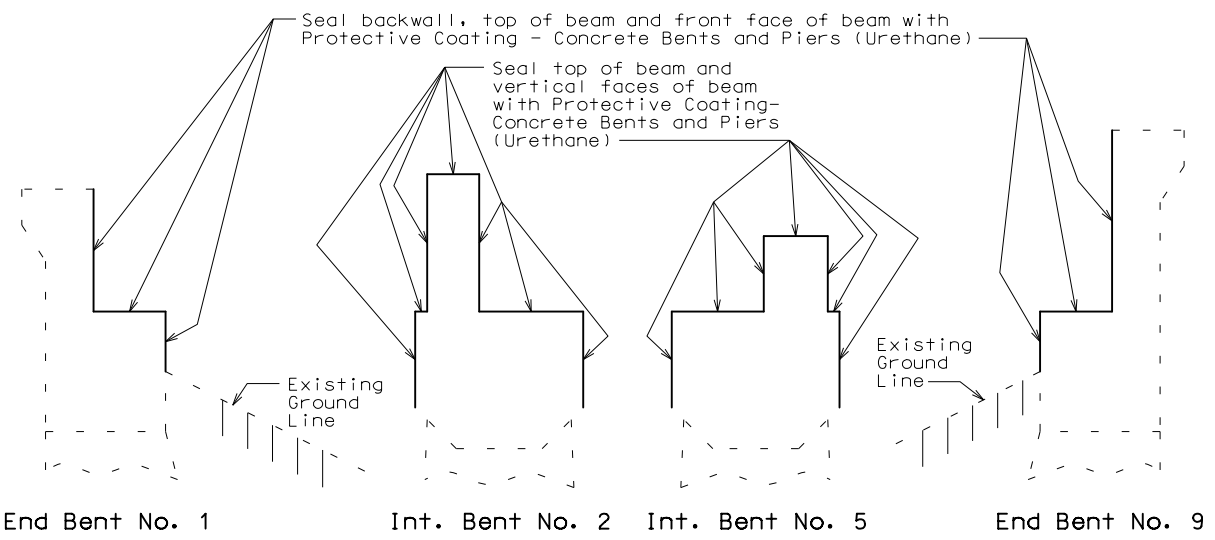
SECTION THRU EXISTING END BENT NO. 9
SHOWING REMOVAL OF EXPANSION DEVICE
AND ADJACENT CONCRETE



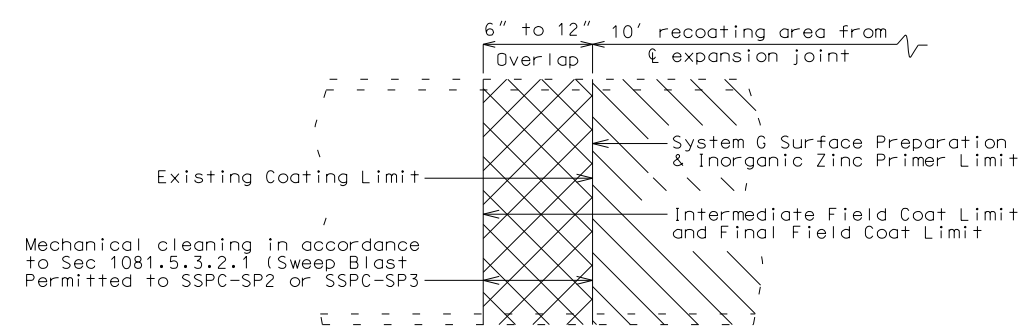
DETAILS SHOWING REMOVAL OF EXPANSION DEVICE
AND ADJACENT CONCRETE AT END BENT NO. 9



PART SECTION OF
EXISTING CURB OUTLET
PART ELEVATION OF
EXISTING CURB OUTLET
DETAILS SHOWING LIMITS OF CLEAN AND EPOXY SEAL
NOTE: Epoxy Polymer Overlay not shown for clarity.
Existing bridge rail not shown for clarity.



DETAILS OF CONCRETE PROTECTIVE COATING



PART ELEVATION SHOWING LIMITS OF PAINT OVERLAP
(Vertical or horizontal paint limit. Horizontal limit shown)

NOTES:
For details of Strip Seal Expansion Device at Intermediate Bents No. 2 & 5, see Sheet No. 3.
For details of Strip Seal Expansion Device at End Bent No. 9, see Sheet No. 4.
For details of Partial Removal of End Post at End Bents No. 1 and 9, see Sheets No. 5 & 6.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 2/1/2012

ROUTE 34 STATE MO

DISTRICT BR SHEET NO. 2

COUNTY WAYNE

JOB NO. JOP0876

CONTRACT ID. 090626-X04

PROJECT NO. FAF-34-1(35)

BRIDGE NO. F01112

DESCRIPTION

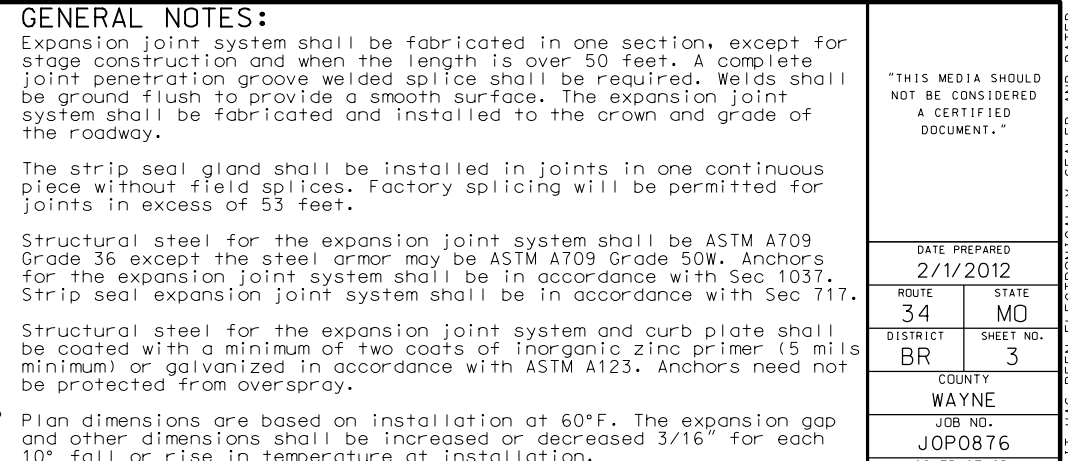
DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

FINAL PLANS

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



PART ELEVATION OF CURB

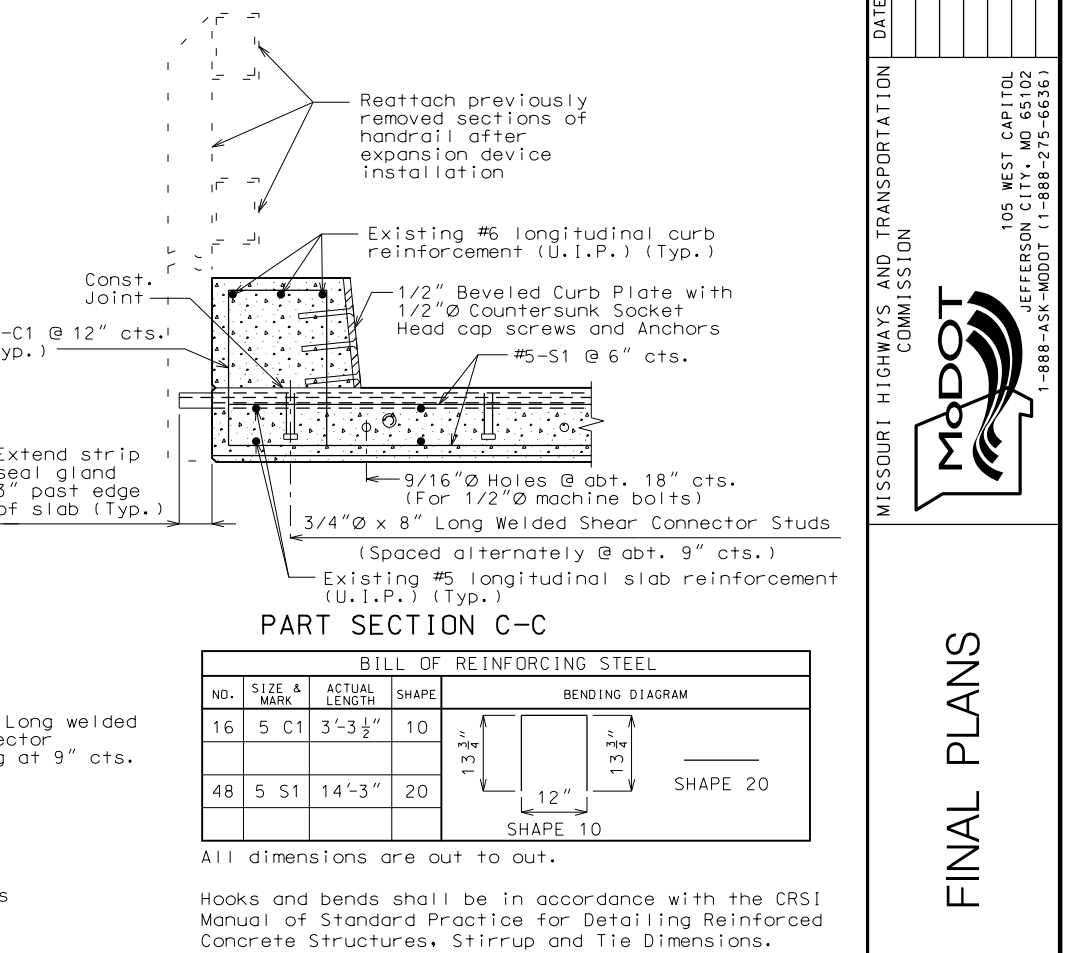
Notes: Strip seal gland not shown for clarity.

Longitudinal reinforcing steel shall be cut (if necessary) so that ends shall not be more than $\pm 1"$ from vertical leg of the steel armor at the expansion joint system.

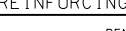
Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

Curb plate anchors shall be a drilled cone expansion or a cast-in-place wing type threaded insert. The minimum ultimate pullout capacity for these anchors shall be 2700 lbs in $f'c = 4000$ psi concrete. Lead anchors will not be permitted. Holes in the curb for anchors shall not be drilled until the concrete is at least 7 days old.

<p>The contractor shall use a mechanical bar splice for #5-S1 bars at the edge of slab between construction stages. The total bar lengths for bars indicated in the bill of reinforcing steel are determined based on the end of the bars being located flush to the face of the construction joint. No additional payment will be made for any additional bar lengths required for the mechanical bar splices. Mechanical bar splices shall be in accordance with Sec 706 except that no measurement will be made for mechanical bar splice and will be considered completely covered by the contract unit price for the reinforcing steel.</p>	DESCRIPTION
--	-------------



BILL OF REINFORCING STEEL			
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE
16	5 C1	3'-3 1/2"	10
48	5 S1	14'-3"	20



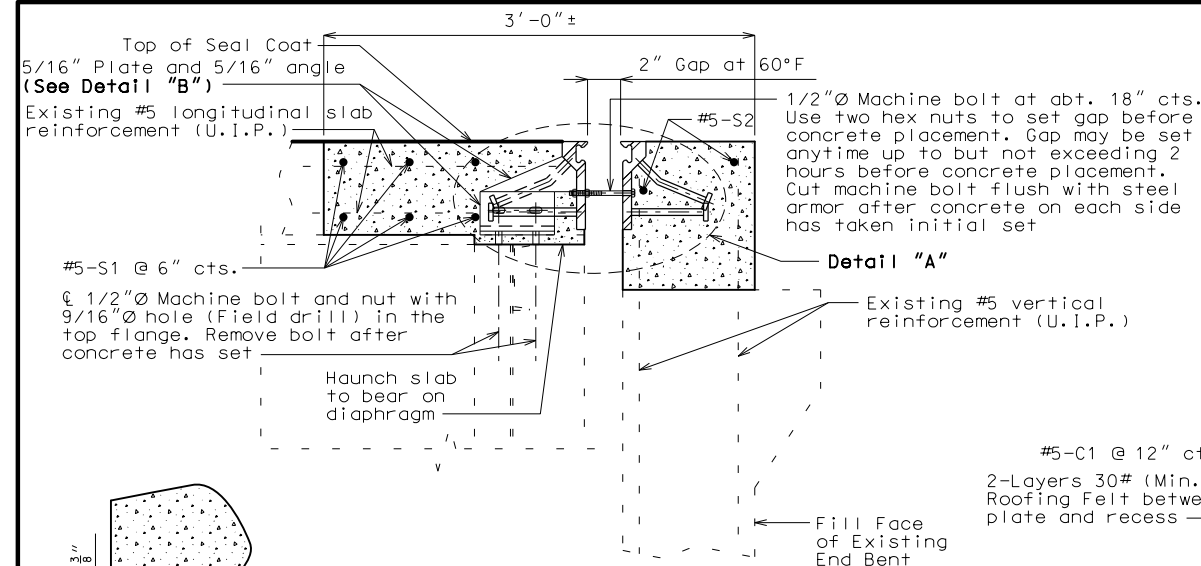
SHAPE 10

SHAPE 20

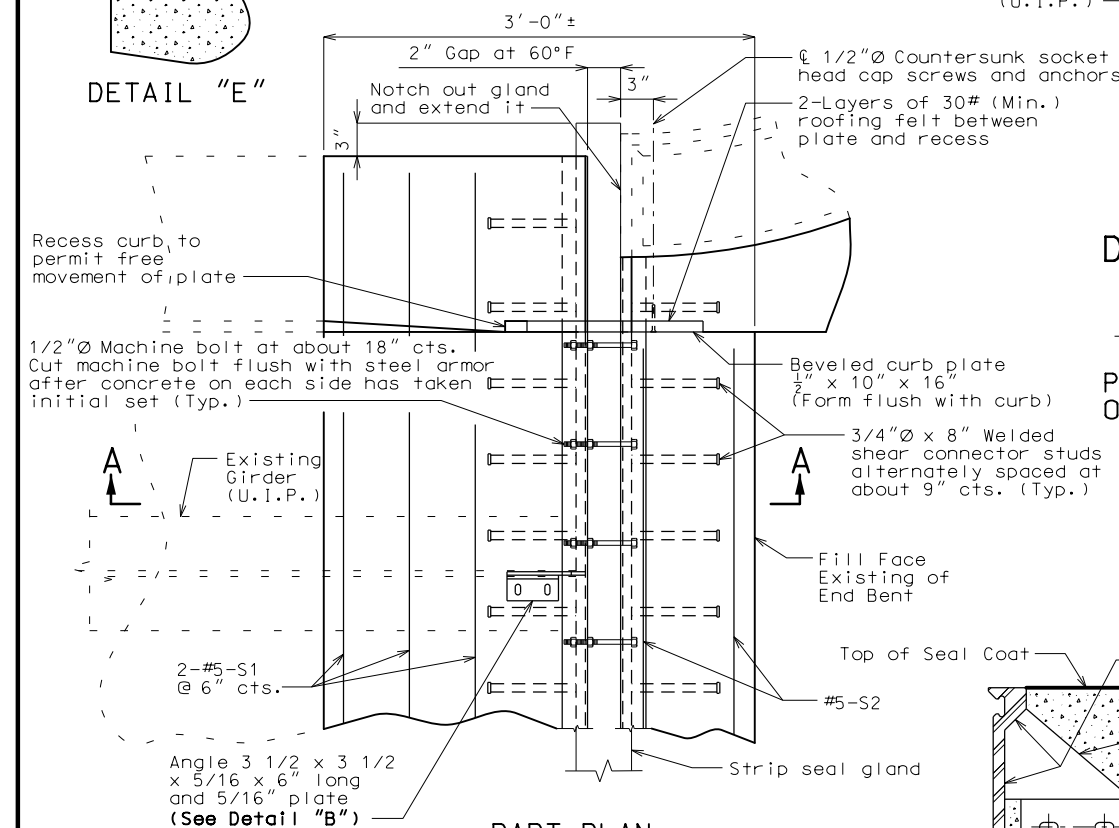
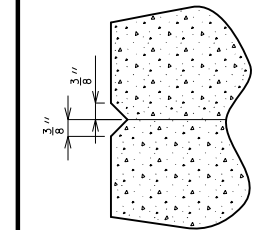
All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual lengths are measured along centerline of bar to the nearest inch.



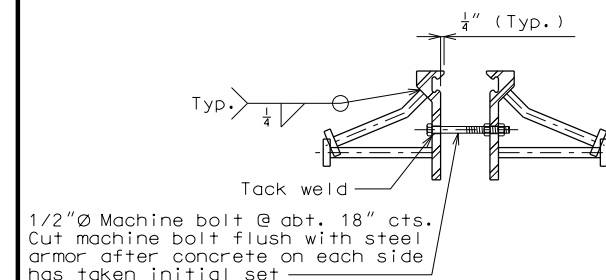
SECTION A-A
Note: Strip seal gland not shown for clarity.



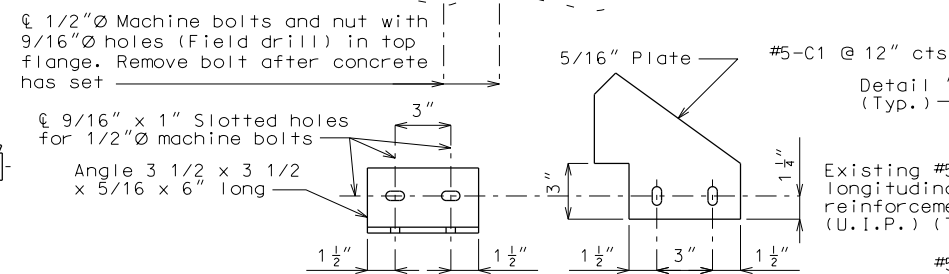
PART PLAN

Note: Existing longitudinal slab reinforcement not shown for clarity.

Existing end bent backwall vertical reinforcement not shown for clarity.



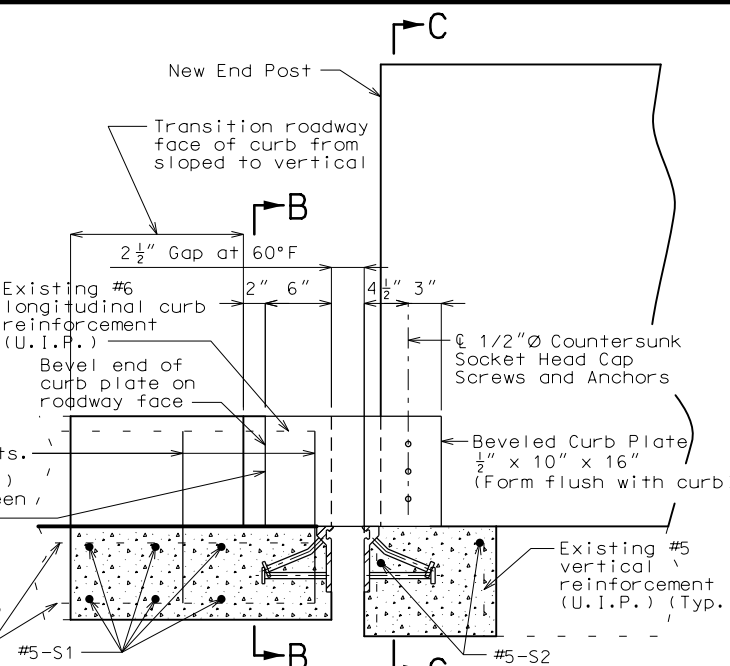
DETAIL "A"



DETAIL "B"

DETAILS OF STRIP SEAL AT END BENT NO. 9

Note: This drawing is not to scale. Follow dimensions.

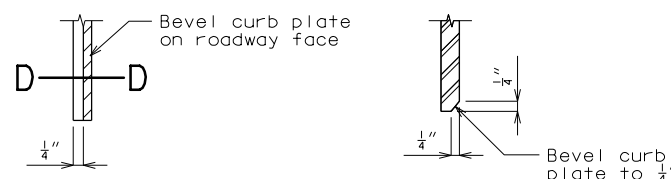


PART ELEVATION OF CURB

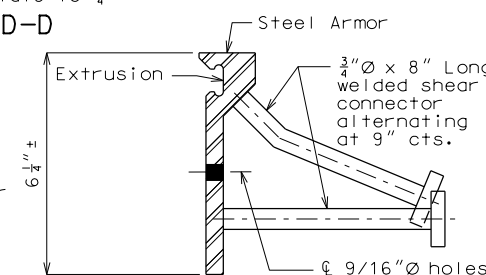
Note: Strip seal gland not shown for clarity.

Handrail not shown for clarity.

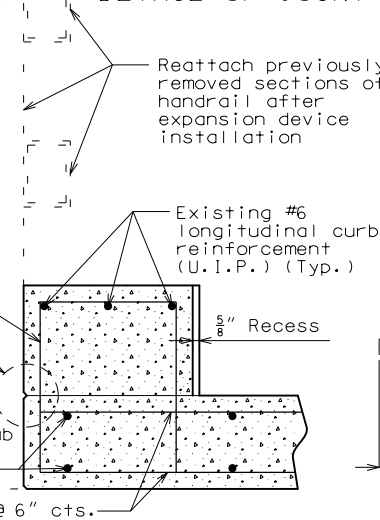
Existing end post not shown for clarity.



PART ELEVATION AT END OF BEVELED CURB PLATE



DETAIL OF JOINT ARMOR



PART SECTION B-B

GENERAL NOTES:

Expansion joint system shall be fabricated in one section, except for stage construction and when the length is over 50 feet. A complete joint penetration groove welded splice shall be required. Welds shall be ground flush to provide a smooth surface. The expansion joint system shall be fabricated and installed to the crown and grade of the roadway.

The strip seal gland shall be installed in joints in one continuous piece without field splices. Factory splicing will be permitted for joints in excess of 53 feet.

Structural steel for the expansion joint system shall be ASTM A709 Grade 36 except the steel armor may be ASTM A709 Grade 50W. Anchors for the expansion joint system shall be in accordance with Sec 1037. Strip seal expansion joint system shall be in accordance with Sec 717.

Structural steel for the expansion joint system and curb plate shall be coated with a minimum of two coats of inorganic zinc primer (5 mils minimum) or galvanized in accordance with ASTM A123. Anchors need not be protected from overspray.

Plan dimensions are based on installation at 60°F. The expansion gap and other dimensions shall be increased or decreased 1/8" for each 10° fall or rise in temperature at installation.

Longitudinal reinforcing steel shall be cut (if necessary) so that ends shall not be more than 1" from vertical leg of the steel armor at the expansion joint system.

Concrete shall be forced under and around steel armor and anchors. Proper consolidation of the concrete shall be achieved by localized internal vibration.

Curb plate anchors shall be a drilled cone expansion or a cast-in-place wing type threaded insert. The minimum ultimate pullout capacity for these anchors shall be 2700 lbs in f'c = 4000 psi concrete. Lead anchors will not be permitted. Holes in the curb for anchors shall not be drilled until the concrete is at least 7 days old.

Shift S-bars where necessary to clear shear connector studs on the expansion joint system.

For details of end post replacement, see Sheet No. 6.

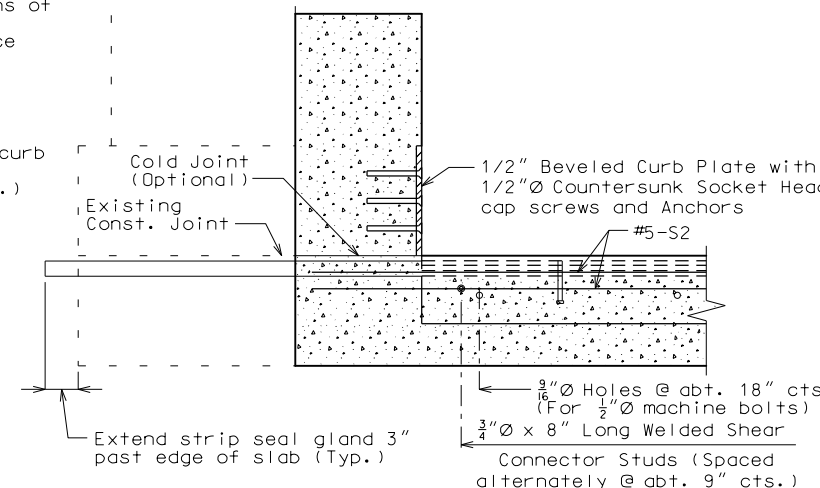
The contractor shall use a mechanical bar splice for #5-S1 and #5-S2 bars at the edge of slab between construction stages. The total bar lengths for bars indicated in the bill of reinforcing steel are determined based on the end of the bars being located flush to the face of the construction joint. No additional payment will be made for any additional bar lengths required for the mechanical bar splices. Mechanical bar splices shall be in accordance with Sec 706 except that no measurement will be made for mechanical bar splice and will be considered completely covered by the contract unit price for the reinforcing steel.

BILL OF REINFORCING STEEL					BENDING DIAGRAM	
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE			
4	5 C1	3'-3 1/2"	10			
12	5 S1	14'-3"	20			
4	5 S2	13'-8"	20			

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual lengths are measured along centerline of bar to the nearest inch.



PART SECTION C-C

Note: For end post reinforcement, see Sheet No. 6.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED

2/1/2012

ROUTE

34

DISTRICT

BR

COUNTY

WAYNE

JOB NO.

JOP0876

CONTRACT ID.

090626-X04

PROJECT NO.

FAF-34-1(35)

BRIDGE NO.

F01112

DESCRIPTION

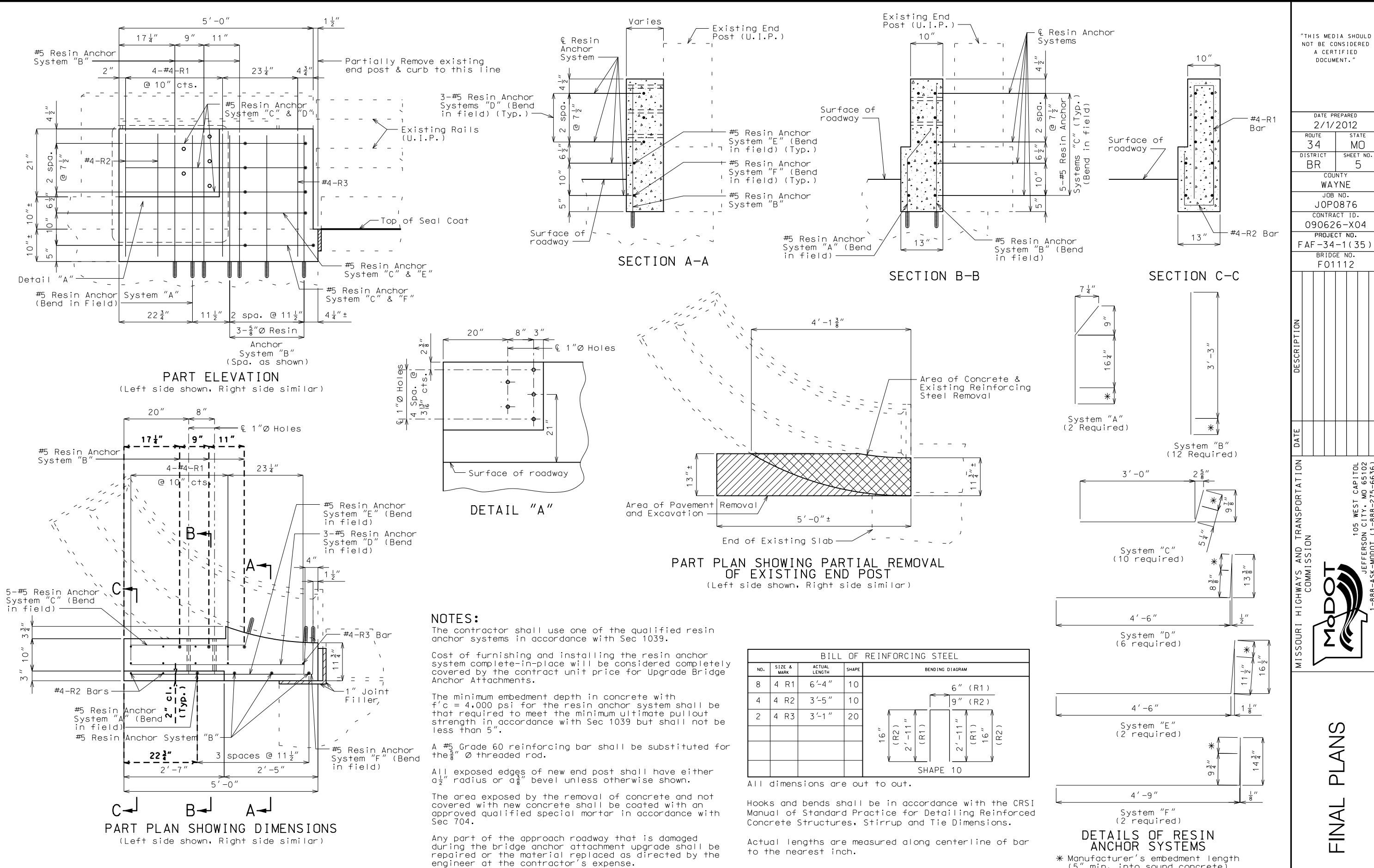
DATE

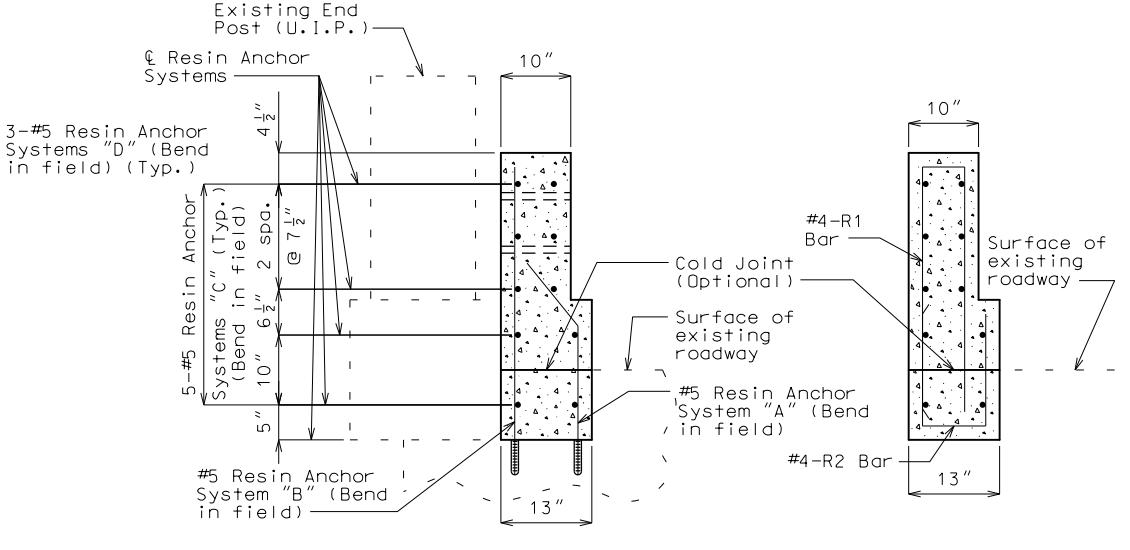
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



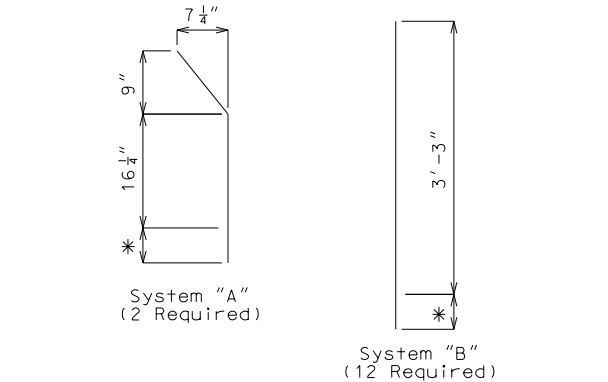
FINAL PLANS

REV.





SECTION C-C



2 5/8"

3'-0"

9 7/8"

System "C"
(10 required)

13 3/8"

2 5/8"

4'-6"

System "D"
(6 required)

16 1/2"

2 5/8"

4'-6"

System "E"
(2 required)

14 3/4"

2 5/8"

4'-9"

System "F"
(2 required)



Any part of the approach roadway that is damaged during the bridge anchor attachment upgrade shall be repaired or the material replaced as directed by the engineer at the contractor's expense.

Actual lengths are measured along centerline of bars to the nearest inch.

* Manufacturer's embedment length
(5" min. into sound concrete)
